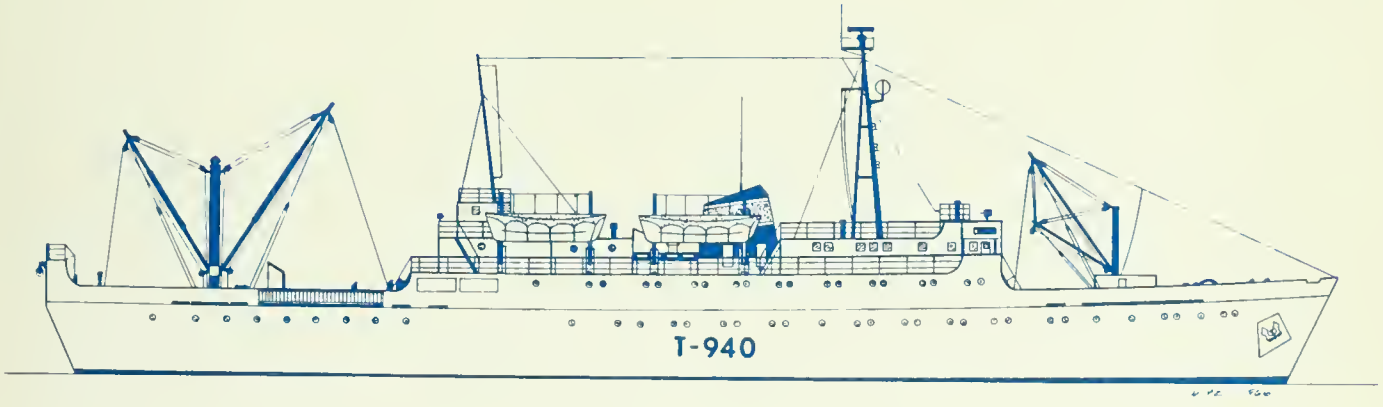
World Fishing Fleets

An Analysis of Distant-water Fleet Operations

Past - Present - Future

Volume V

The Baltic States
The Commonwealth of Independent States
Eastern Europe



NATIONAL MARINE FISHERIES SERVICE
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

SH
11
.A2
N67
v.5

World Fishing Fleets:

An Analysis of Distant-water Fleet Operations
Past - Present - Future

MARINE
BIOLOGICAL
LABORATORY
LIBRARY
WOODS HOLE, MASS.
W. H. O. I.

Volume V

The Baltic States
The Commonwealth of Independent States
Eastern Europe

MBL/WHOI
0 0301 0055203 0

Prepared by
The Office of International Affairs

Milan Kravanja
Ellen Shapiro

November 1993
NOAA Tech. Memo. NMFS-F/SPO-13

NATIONAL MARINE FISHERIES SERVICE
National Oceanic and Atmospheric Administration
Silver Spring, Maryland
November 1993

Contents

WORLD FISHING FLEETS
The Baltic States,
Commonwealth of Independent States,
and Eastern Europe
Volume 5.

1.0 Overview 1

2.0 Baltic States 9
2.1 Overview 11
2.2 Estonia 21
2.3 Latvia 45
2.4 Lithuania 67

3.0 Commonwealth of Independent States 87
3.1 Overview 89
3.2 Russian Federation 93
3.3 Ukraine 147
3.4 Georgia 169

4.0 Eastern Europe 177
4.1 Overview 179
4.2 Bulgaria 185
4.3 Poland 209
4.4 Romania 255
4.5 Former Yugoslavia 275

Photo 1.--The Radzionkow is a 5,336-GRT fish transport serving the Russian high-seas fishing fleet.

Photo 2.–Soviet/Russian fishery motherships have supported Soviet expansion into the world's oceans. The Svetlyiy Luch (5,000-GRT) was bought from Japan.

STATISTICAL NOTE

A major source of statistical data for several countries in this study was the *Statistical Tables* of Lloyd's Register of Shipping which provided uninterrupted fleet statistics from 1975 through June 1992. Lloyd's most recent publication, *World Fleet Statistics*, is especially useful since it gives the statistical data as of December 31, 1992 (the *Statistical Tables* only listed the status of the fleets as of June 30 of each year) and also calculates the average age of each country's fleet. The Lloyd's Register of Shipping includes worldwide data for vessels having over 500 gross registered tons (i.e. high-seas fishing vessels) that can be used for analyzing trends and making comparisons among countries.

The most difficult problem that the authors encountered was the recent non-existence of most of the covered countries. The 3 Baltic states, Ukraine, Georgia, and, last but not least, the Russian Federation, became independent sovereign states in late 1991 when the Union of Soviet Socialist Republics dissolved into its 15 component parts. This event made it difficult to follow the historical sequence of the increase or decrease of the fishing fleets in those countries. (For other countries such historical data are available in the Lloyd's Register of Shipping.) In obtaining information, we were fortunate to receive the outstanding cooperation of the U.S. Office of Naval Intelligence (ONI) which provided a complete vessel inventory for all the covered countries.

Decommissioning of high-seas vessels from the registers of the covered countries (by reflagging, selling, or scrapping of vessels) is occurring so rapidly that we have no illusion that the report presents a complete, updated picture. Through many personal contacts and communications, the authors have tried, to the best of their ability, to verify the available data and eliminate any inconsistencies and contradictions. These efforts are described mostly in the notes accompanying the various statistical appendices. Any help from the readers to obtain additional information on decommissioning would be most appreciated.

EMPHASIS ON HIGH-SEAS FLEET

The authors have defined, for the purposes of this study, high-seas fishing vessels as vessels having over 500 gross registered tons. The authors decided to use this definition since most high-seas fishing vessels in the covered countries exceed the 500 GRT mark. Existing data, such as those provided by *Lloyd's*, give worldwide fleet statistics based on the gross tonnage, but do not describe where these vessels are deployed. The authors have had to rely mainly on extensive NMFS files to determine the fishing grounds where these high-seas fleets are deployed.

In our study we have used the term "high-seas" to identify vessels having over 500 GRT that fish beyond 200-mile Exclusive Economic Zones. In some cases, we used the term "distant-water" to identify fishing grounds far from homeports.

CITATION OF THIS PUBLICATION

This volume should be cited as: Kravanja, Milan and Ellen Shapiro. The Baltic States, The Commonwealth of Independent States, and Eastern Europe (fishing fleets). Published in: "World Fishing Fleets: An Analysis of Distant-water Fleet Operations. Past-Present-Future. Volume V." Prepared by the Office of International Affairs, National Marine Fisheries Service, NOAA, U.S. Department of Commerce. Silver Spring, Maryland, November 1993.

A WORD ABOUT REFLAGGING

Reflagging, registering a vessel in another country, is a growing concern for fishery managers around the world. Reflagging is done for many reasons. The simplest case is a vessel owner in one country selling a vessel to a new owner in a different country. In other cases, local requirements may require all joint venture fisheries' vessels to fly the flag of one particular country. In some instances, and particularly for older and less efficient vessels, fishermen may not be able to operate profitably in one country and may reflag their vessel in another where taxes, fuel costs, and crew salaries are less onerous. While there are several major reasons for reflagging a vessel, one reason of growing concern is reflagging to avoid internationally agreed measures for the conservation and management of living marine resources. By reflagging a vessel with a country that is not a signatory to an agreement designed to manage and/or conserve living marine resources, a vessel may avoid the regulations/conservation measures for a regional area. The problem is compounded by the fact that many of the countries frequently used for reflagging simply do not have the staff to monitor the fishing operations of their flagged vessels throughout the world. The issue of reflagging is gaining international attention and is the subject of the proposed Agreement to Promote Compliance with International Conservation and Management Measures for Fishing Vessels on the High Seas approved by the Food and Agriculture Organization of the United Nations in November 1993 for ratification by interested States.

SPECIAL NOTICE: In the preparation of this report, the authors noted that in many instances reflagging simply involved the transfer of ownership from one owner to another. The reasons for other reflaggings were less clear. However, the purpose of this project was to identify ***trends*** and the results obtained through our research efforts show that reflagging has increased sharply in the last few years.

ACKNOWLEDGEMENTS

Numerous individuals have helped to prepare this report. The authors wish to thank the many individuals outside the Department of Commerce who contributed to this project. The Foreign Service Officers and Foreign Service Nationals at U.S. diplomatic posts were extremely helpful in obtaining information and providing useful comments and evaluations of our draft documents. The U.S. Navy provided invaluable data that helped to identify the magnitude of reflagging. The statistical group at the FAO Department of Fisheries in Rome provided needed statistics on the fishing catch. Special thanks are due to the *Lloyd's Register of Shipping* for allowing us to use their data. Members of the Diplomatic Corps in Washington, D.C. provided support to our research efforts, and to each of them we would like to express our sincere appreciation. We particularly value the assistance of the individuals who contributed to the country analyses:

Baltic States: The cooperation of Mr. Andrew Silski, Baltic Countries Affairs Officer, U.S. Department of State, in coordinating liaison with U.S. Embassies in the Baltic states, is much appreciated. Mr. Erling Hulgaard of the Danish Ministry of Fisheries contributed significantly to our understanding of Baltic fisheries.

Estonia: Mr. Jaak Pollu, Advisor to the Estonian Board of Fisheries, and Minister of the Environment, Tonis Kaasik, provided informative insights into Estonian fisheries. The dedicated help of Ms. Ingrid Kollist, Economic Officer at the U.S. Embassy in Tallinn, and of Foreign Service National, Mr. Indrek

Kaju, made Estonia the best and the most up-to-date of the three Baltic reports.

Latvia: Mr. Andris Ukis, Deputy Minister of Maritime Affairs, spent long hours during a visit to Washington briefing the authors on the intricacies of Latvian fishery trends.

Lithuania: Mr. Algirdas Rimas, Economic Officer at the U.S. Embassy in Vilnius, provided an informative cable on the Lithuanian high-seas fleet that was the basis of our study. Also helpful were the insights of Mr. Eugenius Shpelys, Director General of the Klaipeda fishing port.

Russian Federation: Despite a request from the U.S. Embassy in Moscow to the State Committee on Fisheries of the Russian Federation, information was not received in time for inclusion in this report. The Russian chapter is based in its entirety on NMFS files and informative discussions with the current Russian Fisheries Attache, Mr. Yuriy N. Bovykin, and the Assistant Attache, Viktor N. Solodovnik. The authors would like to take this occasion to thank their many friends in the Russian Federation for past support and cooperation.

Ukraine: Despite repeated requests from the U.S. Embassy in Kiev to the Ukrainian State Committee on Fisheries, information was not received in time for inclusion in this report. Without the extensive files of the Office of Naval Intelligence of the U.S. Navy, this chapter could not have been written.

Georgia: Mr. Steve Carrig, Georgia Desk Officer, U.S. Department of State, assisted us in trying to obtain the latest information on the Georgian high-seas fleet. Unfortunately, because of the political turmoil in the country, it was impossible to get information in time for this report.

Bulgaria: Mr. John Struble, Economic Officer at the U.S. Embassy in Sofia, provided helpful answers to the many questions that the authors had on the Bulgarian fleet. Many thanks also to Mr. Todor Ivanov of Okeanski Ribolov for his cooperation.

Poland: The U.S. Embassy in Warsaw transmitted updated statistics on the Polish high-seas fleet prepared by the Department of Marine Fisheries in the Ministry of Transport and Maritime Economy which were the most extensive and accurate of all the countries covered. Former Polish Fisheries Attache in the United States, Mr. Edward Budzinski, provided helpful insights, and the authors would like to thank him for his long-term friendship and cooperation. We wish to thank Professor Zygmunt Polanski, the Director of the Polish Marine Fisheries Institute, for his help in interpretating conflicting data.

Romania: The U.S. Embassy in Bucharest provided an informative cable on Romanian shipyards.

Former Yugoslavia: The Slovenian Ambassador to the United States, His Excellency, Dr. Ernest Petric, kindly reviewed and commented on the Yugoslavian chapter.

The authors were assisted in the preparation of the report by Charles Taylor, Tanya L. Rasa, and Christine Parker. Doretha White and Ruth Ware carefully typed many of the lengthy and complicated appendices under the supervision of the Division Secretary, Carolyn MacDonald. Lance Samuels ably prepared many graphics illustrating the text. Our colleagues, Dennis Weidner and Mark Wildman contributed their well-researched insights on the operations of the covered countries' high-seas fleets in Latin American and Asian countries. William Folsom, the European Desk Officer in the Division, helped us format the final report. Without his and Mark Wildman's dedicated assistance over the last weekend, this report could not have been finished on time. The invaluable contributions made by the dedicated staff of the Office of Naval Intelligence and the help of Frederick Beaudry, the Division Director, in obtaining photographs and country maps, are greatly appreciated.

Prepared by:

Division of International Science, Development and Foreign Fisheries Analysis
The Office of International Affairs, F/IA2
National Marine Fisheries Service, NOAA
U.S. Department of Commerce
1335 East-West Highway
Silver Spring, MD 20910-3225

TEL: 301-713-2286
FAX: 301-713-2313

1.0

OVERVIEW

The fishing fleets of the Baltic states, Eastern Europe, and the Commonwealth of Independent States harvested approximately 9.8 million tons of fish and shellfish in 1991 (slightly under 10 percent of the world catch). The Commonwealth of Independent States fishermen landed over 9.2 million tons. The Russian Federation alone harvested 6.7 million tons of this total. The remainder was caught by Baltic, Ukrainian, and Georgian fishermen. East European countries (Poland, Romania and Bulgaria) caught 0.6 million tons; their catch has decreased drastically in recent years.

These countries have 4,113 fishing vessels registering 8.8 million gross registered tons (GRT) in 1993. This includes 2,778 high-seas vessels (those having over 500 GRT) registering 8.6 million GRT, as highlighted in table 1. This high-seas fleet consists of some of the largest fishing vessels in the world; the gross tonnage of the individual vessels averages 3,090 GRT per vessel!

This fleet of large vessels poses a potential problem to managers of living resources around the world. Its fishermen can quickly target stocks of fish anywhere in the world and have the potential to overfish these resources in a short period of time. The dissolution of the Soviet Union has resulted in a sharp lessening of controls over these fleets; many vessels now operate independently. It is difficult, if not impossible, to follow the movements of these hundreds of huge fishing vessels.

These countries have been reducing their registries by reflagging vessels to other countries in the last 2 to 3 years. The three Baltic states reflagged 16 vessels with a total tonnage of 38,382 GRT. Poland is known to have reflagged 28 vessels, but Romania and Bulgaria have not reflagged any, while 26 high-seas vessels (160,408 GRT) from Russia and 6 vessels (18,945 GRT) from Ukraine were reflagged.

These former Communist countries are currently experiencing profound economic and political changes. The once tightly administered fishing fleets of these countries are undergoing privatization and are attempting to establish fishing operations wherever possible. Many vessels are seeking new opportunities in distant fishing grounds under bilateral agreements, joint ventures, or as chartered vessels. It is difficult to account for all of the adjustments currently being made in these huge fishing fleets as the situation is changing constantly, while the fishery authorities remain tight-lipped about them.

Table 1.--Former Communist Countries. Fishing and high-seas fishing vessels; 1993.

Country	Fishing and fishery support vessels					
	High-seas fleet		Coastal/Inshore fleet		Total fishing fleet	
	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage
	Number	*1,000-GRT*	*Number*	*1,000-GRT*	*Number*	*1,000-GRT*
Baltic States						
Estonia	90	226	56	10	146	236
Latvia	152	502	71	10	223	512
Lithuania	116	429	93	0	209	429
Sub-total	358	1,157	220	20	578	1,177
Commonwealth of Independent States						
Russia	1,999	5,941	755	157	2,754	6,098
Ukraine	247	890	108	17	355	907
Georgia*	15	45	20	3	35	48
Sub-total	2,261	6,876	883	177	3,144	7,053
Eastern Europe						
Poland	85	251	215	25	300	276
Romania	50	221	7	1	57	222
Bulgaria	24	79	10	1	34	80
Sub-total	159	551	232	27	391	578
Total	2,778	8,584	1,335	224	4,113	8,808

GRT - Gross registered tons. *Georgia rejoined the Commonwealth in October 1993.
Source: Office of Naval Intelligence, U.S. Navy, July 1993.

I. REGIONAL OVERVIEW

A. Baltic States

The three Baltic countries, **Estonia, Latvia,** and **Lithuania**, became independent in 1991, after being part of the Soviet Union for almost five decades. The Baltic fishing industries which were part of the centrally planned economy, directed by the Soviet Ministry of Fisheries in Moscow, had to readjust quickly to the new free-market demands. Their fishing fleets were previously supported by the giant (and expensive) Soviet network of fishery support vessels and representatives in foreign ports. The Baltic states now have to secure their own arrangements for access to fishing grounds in foreign 200-mile zones. The Baltic fisheries also had to face the loss of the infrastructure and domestic Soviet sales network on which they relied over the past half century. Most importantly, they can no longer count on cheap, subsidized diesel oil, but have to purchase it with foreign currencies. The difficult transition from a command to a free-market economy has been exacerbated by the need to reorganize the administrative staffs following the dissolution of the Soviet Western Fisheries Administration in Riga.

The capacity of the Baltic fishery fleets exceeds the currently available fishery resources. The moratorium on fishing off Namibia and the loss of fishing in the Moroccan 200-mile zone were especially painful. To counter these unfavorable developments, the Baltic countries have concluded several bilateral fishery agreements and have begun to reduce the gross tonnage of their high-seas fleets. During the last few years, a total of 31 vessels with over 70,000 gross tons have been decommissioned (16 of the units were reflagged) and the process is by no means ended. In July 1993, the Baltic states owned 358 high-seas fishery vessels with a gross tonnage of 1.2 million GRT. The average age of these fleets is only 14 years, but the maintenance and modernization of the fleet is complicated by the fact that the vessels were constructed in countries whose current economic environment is not conducive to efficient supply of spare parts or major repairs.

Among the most important factors for the future profitability of the Baltic fishing industries is the privatization program which all three governments have begun. Another way to obtain sufficient raw materials to operate the vessels and the processing plants lies in the joint ventures with foreign fishing companies which still have abundant fishery resources within their countries' 200-mile economic zones. Leasing and chartering arrangements will help in keeping the Baltic fishermen employed.

Estonia

Estonia's fishing industry, based in the country's two marine ports at Tallinn and Parnu, employs about 30,000 people. In 1991, Estonian fishermen landed 315,000 metric tons of fish and shellfish, most of which was exported; approximately 90 percent of exports were sold to the former Soviet Union. The catch was mostly used to produce edible fishery products, but over 20 percent was reduced to fishmeal (for animal feeds) and fish oils. Estonians have always been fishermen and the fishing industry plays an important part in the country's

economy, contributing almost 900 million rubles to the Estonian gross domestic product in 1991. The value of fishery exports in 1991 amounted to 775 million rubles, or over 85 percent of the total value of fisheries output.

The Estonian fishing fleet has 150 vessels with a total gross tonnage of 236,000 tons. The high-seas fleet accounts for 96 percent of the entire tonnage, even though it has only 75 vessels of various classes. Many vessels are aging and will have to be decommissioned. The capacity of the Estonian high-seas fleet exceeds the current availability of fishery resources. The high-cost of diesel fuel further restricts the operations of the distant-water fleet. Estonian fishery managers, however, promptly reduced 18 percent of the fleet's tonnage in the last two years. They are actively searching for partners in joint fishery ventures which would allow them access to fishery resources. Bilateral fishery agreements have been concluded with a half dozen countries. Several government-owned companies have been privatized and the prospects for Estonian fisheries appear favorable.

Latvia

A leading traditional sector in the Latvian economy, the fishing industry used to employ 48,000 persons, according to the Latvian Ministry of Maritime Affairs. The Latvian fishing industry is based mainly in two fishing ports -- Riga and Liepaja. The fishing industry contributed almost 500 million rubles to the Latvian economy in 1990. As the Soviet Union was breaking up in 1991, the Latvian fishing fleet consisted of 351 fishing and fishery support vessels, but has since been reduced to 223 units. Among the three Baltic Soviet republics, Latvia's fleet was by far the largest, comprising almost 50 percent of the 762 vessels based in the ports of the Baltic republics. The high-seas fleet, owned by the Government, is fishing primarily in the Atlantic, both northern and southern. The principal fishing grounds are off Canada, Mauritania, Nigeria, the Faroe Islands, and Russia. The Government, however, is exploring the possibility of concluding additional bilateral fishery agreements.

Lithuania

Lithuania is the largest of the three Baltic countries. In 1990, Lithuanian fishermen harvested 355,000 metric tons of fish. The high-seas fishing fleet of 153 vessels landed 326,000 metric tons of fishery products. The small Baltic fleet landed only 18,000 tons. About 9,000 tons were harvested from fresh-water ponds. By the end of 1992, however, the total catch was halved to 170,000 tons. The fisheries sector employed about 24,000 persons in 1991; of this total, 9,000 were employed in the fishing fleets, while 15,000 were working in the fish-processing industry.

The Lithuanian fishing fleet consisted of 201 fishing and fishery support vessels as the Soviet Union was breaking up in 1991. Of this total, 153 vessels fished on the high-seas and 48 in the Baltic. Lithuania had the smallest fleet out of the three former Soviet Baltic republics, comprising only about 26 percent of the 762 vessels in the Baltic fleets. Most of the fishing fleet is in poor condition when compared to the average standards of Western fishing nations. Nearly one half of the fishing vessels deployed in the Baltic Sea and on the high-seas is obsolete. The processing fleet is in

even worse condition; only about a third of the vessels is considered worthwhile to upgrade and modernize. However, the difficult economic situation currently facing the Lithuanian Government will likely mean that funding for fleet modernization and replacement is unavailable.

B. Commonwealth of Independent States (CIS)

Following the dissolution of the Union of Soviet Socialist Republics (USSR) in December 1991, most of the component republics established a looser political association called the Commonwealth. The Baltic States and Georgia chose not to join the CIS, so that only two republics with high-seas fishing capabilities remained in the CIS -- the Russian Federation and Ukraine. In October 1993, however, Georgia also asked to become a CIS member.

In the former Soviet Union, the fishery fleets of all republics operated as a unit divided only by the various fishing regions. Russian, Ukrainian, and Georgian vessels all fished together in any particular fishing ground. The fleets were under the administrative command of the regional administration which organized the so-called expeditions. A fleet of 30 to 40 large stern factory trawlers was managed by a fleet commander whose headquarters were aboard a large baseship. It did not matter from what Soviet republic the vessels originated, they were all part of this highly-organized fishing flotilla. The baseship received the catch from the trawlers, processed it, and passed it on to refrigerated fish carriers for transportation to homeport. The commander's flagship, supplied with fuel and other needs by tankers and cargo transports, distributed these supplies among its vessels. This system, which prevailed for the past 40 years, was suddenly disrupted by the new political arrangements. Each independent country now had to organize its own support and transportation activities, and obtain its own fuel (Georgia and Ukraine have no oil resources and must, therefore, buy diesel oil from Russia or other countries). In addition, the bilateral agreements which were formerly negotiated by the Soviet Ministry of Fisheries were no longer valid. The Russian Federation, as the internationally recognized successor state to the Soviet Union, took over most of these agreements. Ukraine and Georgia, therefore, have to make their own arrangements to obtain access to foreign 200-mile fishery zones. Georgia is especially disadvantaged because its diplomatic corps and political leverage are limited.

All three CIS countries are currently undergoing a major shake-up of their economic systems. In Russia, the slow process of reform, until recently hindered by a conservative parliament, has made privatization more of a hope than a reality. In Ukraine, a severe economic depression has negatively affected the fishing industry. According to one report, only a third of the Ukrainian fishing fleet is deployed in harvesting aquatic resources. No information is available on the fate of the Georgian high-seas fleet following the invasion and occupation of its main fishing port of Poti by rebel troops on October 10, 1993. All CIS republics suffer from the inability to provide their fishing fleets with sufficient quantities of diesel fuel in a timely manner. Confirmed reports indicate that at times as much as a half of the Russian fleet was idling in various ports because of fuel shortages. Other reports describe an even worse situation whereby vessels already

deployed on the high-seas had to stop their fishing operations because fuel tankers did not reach them on time. The authors have been unable to verify any fuel shortages in Ukraine or Georgia, but it must be assumed that a similar, if not worse, situation prevails.

The future of the CIS fishing fleets will depend on the ability of the three countries to obtain the necessary fishery resources to maintain the fleets' operations and provide protein to the domestic population. Also important is the export of fishery products to earn hard currencies with which to modernize and replace the fleet, purchase diesel fuel, and support operations in foreign fishing zones. The joint fishery ventures with foreign companies and arrangements to lease, charter, or sell fishery vessels will become an important part of the future activities of the CIS fishery administrators. Russia has a natural advantage because its 200-mile exclusive economic zone contains some of the most prolific fishing grounds in the world. Ukrainian high-seas fishing operations will probably have to be reduced along with the fleet. The prospects for the Georgian fleet are bleak and it remains to be seen whether it can continue functioning.

C. Eastern Europe

The three major fishing countries in Eastern Europe, **Poland, Romania,** and **Bulgaria**, were associated with former the Soviet Union in the so-called 5-partite agreement (the former East Germany was the fifth member) to help each other develop high-seas fisheries. Although the Russian Soviet Federative Socialist Republic, now the Russian Federation, was the leading force behind the expansion into the world's oceans, all three East European countries rapidly developed their own fishing fleets. Poland invested in an important and productive network of fishery shipyards which built hundreds of vessels over the past five decades.

Bulgaria and Romania

Romania and Bulgaria are both adjacent to the Black Sea and their fisheries have been traditionally based on that body of water. In the 1960s, however, they began to buy high-seas fishing and fishery support vessels from the Soviet Union, Poland and East Germany, and to build an infrastructure for the processing of landed fish. Along with the increase in the fishery vessel tonnage, their marine catch grew rapidly until the late 1970s when coastal countries began to extend their fishery jurisdictions to 200-miles. Neither Romanian nor Bulgarian fishery administrators were able to adapt themselves to the new conditions. As a result, their catch began to stagnate and finally decrease rapidly; soon the aging fleet became more of a burden than an asset.

The outlook for both industries is bleak and the lack of rapid privatization helps to perpetuate the inbred inefficiency of large government-owned corporations. The Bulgarian high-seas fishing company was forced into bankruptcy and will have to be bailed out by government funds to continue operations. The Romania fishing industry is also still government-owned and, as in other the former communist countries, its two principal goals are to fully utilize its fishery fleet and so maintain the full employment of its fishermen and to export fishery products to earn hard currency.

Poland

In Poland, the high-seas fishing industry has better maintained its viability and, although the catch has decreased somewhat and the high-seas fleet shrunk, it continues to be a powerful presence on the world oceans. The future, however, could be catastrophic. Almost the entire Polish high-seas fleet has been concentrated in 1992 and 1993 in the international waters of the Sea of Okhotsk, an enclave surrounded by the Russian 200-mile zone. The Russian Federation, claiming that the fishery resources in that area, as well as their originating stocks in the Russian zone, are in danger of being overfished, are demanding that the Poles, along with the Koreans and the Chinese, stop fishing there. The Poles (and others) refused to do so, stressing that their fishery in international waters is not subject to regulation by coastal states. The Russians have, therefore, exerted diplomatic pressure to declare a moratorium on foreign fishing in the Sea of Okhotsk. If this occurs, the Polish high-seas fleet will have to rapidly find new resources, or even more rapidly, reduce the number of its vessels.

Former Yugoslavia

The Socialist Federative Republic of Yugoslavia (SFRJ) ceased to exist in 1991 when Croatia and Slovenia declared their independence. The country's fisheries have been based on the Adriatic Sea except for a brief, unsuccessful attempt in the 1970s to enter the Atlantic tuna fishery. Most of the 2,000 kilometer-long Adriatic coast is now in the Republic of Croatia. Currently, Croatia and Slovenia have no high-seas vessels and are not expected to expand into high-seas fishing in the near future.

2.0

THE BALTIC STATES

2.1

OVERVIEW

The three Baltic countries, Estonia, Latvia, and Lithuania, reoccupied by the Red Army in 1944-45, were part of the Soviet empire until August 1991. Their fishing industries were developed (along with those of other Soviet republics) as an integral part of the centrally planned economy, directed by the Soviet Ministry of Fisheries in Moscow. A part of the Soviet worldwide fishery activities was conducted from the Baltic states. Baltic-based fishery operations were serviced, as needed, by the Soviet fishery representatives in foreign ports, where repairs, supplies, water, fuel, and other necessities were provided. The three Baltic countries had no effective policy control over the expanding high-seas fisheries conducted from their ports during the Soviet period. The operations of their fishing and fishery support fleets were managed directly by central Soviet authorities through the Western Fisheries Administration (ZAPRYBA), headquartered in Riga, Latvia. In 1993, the Baltic fishing fleet included 578 vessels with a total tonnage of 1,177,000 gross registered tons (GRT). This included 358 high-seas vessels (1,157,000 GRT) that registered more than 500 GRT each.

A. Background

The Baltic fishing fleets, operating for 40 years under the system of the Soviet expeditionary fishing fleets, organized their own fishing expeditions consisting of high-seas trawlers supported by motherships, fish-processors, tankers, water supply vessels, and other support vessels, but these fleets were always fishing under the administrative command of the ZAPRYBA. A ZAPRYBA fleet commander (*nachalnik flota*), located aboard one of the large motherships, was responsible for day-to-day operations and for the transfer of fish to motherships for processing, or to refrigerated transports for delivery to home ports. This system was in force until September 1991 when the Baltic republics achieved independence and took over the operational command of their fleets, processing plants, and other fishery assets from the ZAPRYBA. At that time, each Baltic country had to set up a new administrative system to manage its fishing industry. Estonia's fisheries are now managed by the Estonian National Board of Fisheries of the Ministry of the Environment. This Board develops and

administers fisheries policy, maintains and protects fishery stocks, coordinates research activities, and issues regulations. Latvia's fisheries management was under the jurisdiction of the Latvian Ministry of Maritime Affairs until August 1993, when it was turned over to the Ministry of Transportation. Lithuania's fisheries management is handled by the Fisheries Department in the Ministry of Agriculture.

1. Problems of independence

The fishing industries in all three Baltic states faced a real crisis when they became independent. Their -- by now substantial -- fishing industries suddenly found themselves without the infrastructure and sales network which they had relied on over the past 4 decades. The new Baltic state-owned fishing companies lost maintenance support in foreign ports, centralized marketing agents, and, most importantly, cheap, subsidized Soviet diesel oil.

The Baltic fishing companies have also lost the large Soviet internal marketing network. Before 1991, the Baltic fish-processing plants simply shipped their fishery products to any Soviet domestic trade organization that wanted them. The Russians now consider such deliveries to be imports from a foreign country. The same goes for exports to Ukraine, Belarus, and other parts of the Commonwealth. Besides a specific order for fishery commodities, customs papers have to be made out, duties (if any) paid and, most importantly, payment must be received. Fortunately, the Baltic states have maintained their relationship with the principal Soviet fishery trading company, SOVRYBFLOT, which now operates as a Russian holding company. Various enterprises in the three Baltic countries own shares in SOVRYBFLOT: the Estonian state companies, ESTRYBPROM and ESTRYBKHOZSOIUZ (Estonian Cooperative Fisheries Union), hold two and one shares respectively; the Latvian state-owned Riga Trawler and Refrigeration Fleet and the Liepaja Fishing Fleet Base each holds two shares; and the Jura state-owned fishing fleet of Lithuania holds eight shares.[1]

The most severe problem resulting from independence is how to obtain diesel fuel. In the Soviet period, the subsidized fuel, delivered by the Soviet authorities, represented only about 10-15 percent of the operating costs of Baltic fishing vessels. Now, at world prices, fuel represents anywhere from an estimated 50-70 percent of operating costs. The availability of diesel fuel is not much of a problem, the problem is its price and the fact that it has to be paid for with foreign currencies which all three Baltic countries currently lack. Some bartering was attempted, but it reportedly was not very successful.

2. International agreements

Baltic fishermen used to have access to a large number of 200-mile zones under the 59 bilateral fishery agreements which were concluded by the former Soviet Union. After they won their independence in September 1991, such access rights were no longer available. Each of the three Baltic countries must now negotiate its own agreements for access to fisheries off foreign countries. In view of their inadequate diplomatic leverage and the limited number of diplomatic posts which the Baltic states maintain, this has proven difficult. For example, the Baltic fleets used to fish as Soviet-registered vessels in the **Moroccan** 200-mile zone where the former USSR in

1991 obtained a large annual catch quota of 850,000 metric tons (t). In 1992, the Russian Federation renegotiated the former Soviet accord and managed to obtain a 3-year agreement allowing it to net 400,000 t of sardines and mackerel annually.[2] Morocco, however, chose not to conclude a similar agreement with the now independent Baltic states (or with Ukraine).

More positive are fishery relations with the **European Community (EC)** which, during the past 2 decades, did not allow Soviet vessels to fish in its Exclusive Economic Zone (EEZ). This policy was revised in early 1992 and the Baltic states initialed agreements with the EC in July 1992. Lithuania signed in Vilnius on July 14, Latvia in Riga on July 16, and Estonia in Tallinn on July 17. If the respective parliaments ratified these agreements, they would have become effective in 1993. The accords provide for reciprocal access to respective fishing zones, financial contributions for fishermen's training, and the establishment of joint ventures.[3]

These agreements should also facilitate the admittance of the Baltic states into the **Baltic Sea Fisheries Commission**, and the granting of catch quotas allowing them to fish in that sea. Unfortunately, Russia is claiming successor state rights for the quotas previously allocated to the former Soviet Union, and, even if the Baltic States gain admittance to the Commission, there may be a dearth of available resources. There have been calls from the International Commission for the Exploration of the Seas (ICES) for a 1993 moratorium on Baltic cod and from Greenpeace for a complete moratorium on Baltic salmon.

The agreement with the EC was strongly supported by **Denmark** which soon promoted its own bilateral arrangements. The Danish Government has approved a DK50 million (US$ 7.5 million) grant to the 3 newly independent Baltic countries. These funds will buy 6,000 t of Baltic Sea herring which will be donated to Latvia, Lithuania, and Estonia, in equal amounts of 2,000 t each. The herring will be caught by Danish fishermen from the island of Bornholm (which is going to help the serious unemployment among the fishermen there), paid for by the Danish Government and then donated to the Baltic countries which will send their own refrigerated transports to pick it up. One half of the total amount will be donated to the Baltics in whole, frozen form, while the other half will be headed and gutted; some herring might even be filleted in local Bornholm fish-processing plants. The Danes stipulated in the memorandum of understanding that the donated fish can be used only for domestic consumption in the Baltic states, but the end-products may be exported to members of the Commonwealth of Independent States and other East European countries except to the former German Democratic Republic (which is now united with West Germany).[4] The Baltic Governments will charge their fish-procesing plants a small administrative fee and transportation costs. Any profits obtained from the sale of the canned or smoked products will be used to modernize antiquated processing equipment. Such purchases have already been made in Denmark mostly for updated, used processing equipment.

The Baltic States

801946 (R00112) 10-91

The three Baltic states have also separately concluded bilateral fisheries access agreements with the **Faroe Islands** (with the consent of Denmark). The agreements provide the Baltics with 1993 catch quotas totalling 28,000 t to harvest blue whiting in the Faroese fishing zone in exchange for giving Faroese fishermen a catch quota of 12,000 t of various species.

Neighboring **Sweden** also resumed fishery relations with the Baltic states soon after it recognized them as independent states. The fishery administrators of Estonia, Latvia, and Lithuania signed a quadripartite agreement with Sweden in Stockholm at the end of January 1992. The document defines the contested fishing grounds in the coastal areas of the Baltic Sea. An estimated 75 percent of fishery stocks in the area will be managed by the Baltic states.[5]

Another area where the Baltic states have been able to obtain some fishery catch quotas is in the Northwest Atlantic. The fishing in this area is governed by the **North Atlantic Fisheries Organization (NAFO),** which allocates the catch quotas to various countries. During NAFO's Fourteenth Annual Meeting in Dartmouth (Canada) in September 1992, Russia, as the successor state to the Soviet Union, received a 1993 allocation of 37,300 t of various species, mostly redfish (27,000 tons). In bilateral negotiations, following the conclusion of the Annual Meeting, Russia transferred 12,000 t of its 1993 ocean perch (redfish) quota to Latvia, Estonia, and Lithuania, with each country receiving 4,000 tons. In September 1993, the Russian Federation was allocated 32,573 t of fish for the 1994 fishing year including -- for the first time -- 5,000 t of illex squid which can easily be sold for foreign currencies. The portion that will be transferred to the Baltic countries will be decided later in bilateral talks.

A severe blow to the Baltic fishermen was the moratorium on fishing within its 200-miles which **Namibia** declared in 1991. A large proportion of their total catch came from this area, regulated by the International Southeast Atlantic Fisheries Commission. The Namibian Government, however, has recently announced that foreign vessels can apply for fishing licenses in 1994, and it is possible that some Baltic vessels may be deployed there in the future. Other fishery agreements and joint venture arrangements that individual Baltic countries have concluded, in addition to those mentioned above, are enumerated and explained in the body of the report under each Baltic state.

B. Fishing fleets

The capacity of the Baltic fishery fleets greatly exceeds the current availability of fishery resources. In mid-1993, the Baltic high-seas fishing and fishery support fleets had a gross registered tonnage of 1,156,400 tons, or almost 97 percent of the entire fishery tonnage (appendix 1). The remaining 3 percent consisted of small fishing vessels under 500 gross tons most of which fished in the Baltic.

Given the fact that high-seas tonnage in the late 1940s was zero, one can see how rapidly the Baltic fleets developed to reach almost a quarter of the total fishery tonnage of the former USSR, while the Baltic states' population (8.0 million inhabitants for all three countries) barely reached 4 percent of the total Soviet population.

As shown in appendices 1 and 2, the

Latvian fishery tonnage is not only the largest among the Baltic states, it is also the most disproportionate when related to the population. Every fifth Latvian "owns" a gross high-seas fishery ton, but only every eighth Lithuanian does. One possible explanation for this imbalance is the fact that the Soviet Western Fisheries Administration, which was ordering the vessels and paying for them, was located in Riga, Latvia.

After independence was granted to the Baltic states by the Russian Federation in 1991, there were no disputes - as far as is known - about the ownership of fishery vessels. Whatever vessels were in Baltic ports or were "owned" by the Estonian, Latvian, and Lithuanian fishery administrations, became the property of the newly independent states which lost no time in re-registering these vessels under their own registry. The few exceptions confirm the rule.[6]

Cognizant of the excessive capacity of their fishery fleets, all three Baltic countries have begun to reduce the number of vessels (appendix 3). Estonia leads the way in decommissioning 35,000 gross registered tons, or almost 15 percent of its total tonnage. Lithuania reduced its large fleet by only 5 percent, while Latvia (with the largest Baltic fleet) was able to reduce its tonnage by barely 3 percent in the last two years.[7] The data for Estonia are the most complete and reliable because of the outstanding cooperation of the U.S. Embassy in Tallinn which repeatedly checked the data available in Estonia; it is not impossible that Latvia and Lithuania have also removed from their registries additional vessels, and the authors hope that local readers will be kind enough to notify them of new changes in the fleet complement. Of special interest is the fact that the decommissioned 6 percent of the Baltic fishery fleets was mostly sold for scrap and thus removed from the over-capitalized high-seas fleets.

The average age of the Baltic fleets is only 14 years; the vessels were built more recently than those in practically all other East European countries, including Russia. Since the reduction program will presumably eliminate the oldest vessels, it is hoped that the age of the Baltic fleet will decrease even further.

C. Outlook for the Baltics

Another important factor governing the future efficiency and profitability of the Baltic fleets are the privatization programs. As long as the fleets continue to be owned by the governments (and therefore likely to receive subsidies to cover their deficits), the Baltic high-seas fisheries will not operate at the maximum economic efficiency. In late 1992, Lithuania's privatization programs were the most advanced among the 3 Baltic countries. Its government expected 75 percent of state-owned assets to be privatized by the end of the year, while in Estonia only 15 percent of such assets were privatized. In Latvia, the program was barely in the policy planning stage. A major difficulty is the giant size of the Baltic state-owned fishing companies; no local or even foreign owner has the necessary funds to buy them out. The Baltic fishery managers have already divested themselves of many non-fishing enterprises which were accumulated over the years when investment funds were readily available. In addition to divestitures, a tendency is noted towards breaking up large organizations into smaller parts. This was especially pronounced

among the former Soviet-type fishery cooperatives (kolkhozes).

Another path to survival for the Baltic fleets will be the joint ventures with foreign fishing companies (especially in countries where fishery resources are still abundant within their 200-mile EEZs). Bareboat leasing arrangements and charters will also help to keep the Baltic fishermen employed and the vessels running. It is important that the fleet be occupied since its being idle in ports is economically disastrous.

The question remains: is it still possible to operate the Baltic fishing fleets profitably once they are streamlined and the inefficient old vessels are retired? According to the best available information this is still possible, but the margin of managerial errors and inefficiencies will be much smaller. The Baltic countries realize this necessity and are trying to modernize not only the fishing fleets, but also the infrastructure, by attracting foreign investments and/or by entering into joint ventures with Western fishing, fish-processing, and equipment-manufacturing companies.

ENDNOTES

1. VAO SOVRYBFLOT, *Spravochnik Aktsionerov, Smeshannikh Obshchestv, Sovmestnikh Predpriiatii i Zagranichnikh Predstavitel'stv*. Moscow, 1992.

2. This amount will be reduced by 50,000 t for each year of the agreement.

3. *Eurofish Report*, 30 July 1992.

4. Danish Ministry of Fisheries, Personal Communication, 26 July 1993.

5. Radio Russia, 27 January 1992.

6. One such exception was the training vessel, *Kruzenshtern*. This vessel was seized by the victorious Russian Army from Nazi Germany after the end of World War II, and was used by the Soviet Ministry of Fisheries to train cadets from fishery schools and the merchant marine academy. The *Kruzenshtern's* homeport was Tallinn at the time of the breakup of the USSR, but the Russians insisted it belonged in the Russian fleet and, in December 1991, the vessel set sail for the port of Baltiisk near Kaliningrad.

7. The reduction of vessels data are by no means complete. For instance, the Estonians had an additional 4 vessels with 7,827 GRT marked to be sold in August 1993. They might have been decommissioned already thus further lowering the country's gross tonnage.

Appendix 1. Baltic states. Fishing and fishery support fleets, by country and selected vessel sizes: 1993.

Country	Number	GRT	Average GRT
ESTONIA			
Under 500 GRT	56	9,852	176
Above 500 GRT	90	225,713	2,508
Total	146	235,565	1,613
LATVIA			
Under 500 GRT	71	9,884	139
Above 500 GRT	152	501,935	3,302
Total	223	511,819	2,295
LITHUANIA			
Under 500 GRT	93	19,784	213
Above 500 GRT	116	428,756	3,696
Total	209	448,540	2,146
GRAND TOTAL	578	1,195,924	2,069

Source U S. Navy, Office of Naval Intelligence, July 1993.

Appendix 2. Baltic states. Gross registered tonnage of the high-seas fleet versus population of country; 1993.

Country	Tonnage (1,000 tons)	Population (in millions)	GRT per inhabitant (in GRT)
Estonia	225 7	1 6	7 1
Latvia	501 9	2.7	5.4
Lithuania	428 8	3.7	8 6
Total	1,156.4	8 0	6.9

Sources U S Navy, Office of Naval Intelligence, July 1993 (for gross tonnage), Central Intelligence Agency *The World Factbook 1992* Washington, DC, 1992 (for population as of July 1992).

Appendix 3. Baltic states. Fishing fleet reduction, by country, gross registered tonnage, and percentage of reduction; September 1993.

Country	Gross registered tonnage		Percentage*
	Total	Reduced	
LATVIA	511,819	15,330	3 0
LITHUANIA	448,540	20,547	4 6
ESTONIA	235,565	34,704	14 7
BALTIC TOTAL**	1,195,924	70,581	5 9

Source The individual country reports give the sources from which this information was obtained

* Percentage of total gross tonnage which is known to have been decommissioned from the respective country registers

** Includes both high-seas and Baltic fleets.

2.2

ESTONIA

Estonia is one of three Baltic countries that became independent after being part of the Soviet Union for almost five decades. The Estonian fishing industry was part of the centrally planned economy, directed by the Soviet Ministry of Fisheries in Moscow. The republic's fishing fleet was supported by the giant (and expensive) Soviet network of fishery support vessels and representatives in foreign ports. Estonia now has to secure access to fishing grounds in foreign 200-mile zones itself and can no longer count on cheap, subsidized Soviet diesel oil. Estonia's fisheries have also lost the infrastructure and domestic Soviet sales network on which they relied over the past half century. The difficult transition from a command to a free-market economy has been exacerbated by the need to reorganize the administrative staff following the dissolution of the Soviet Western Fisheries Administration in Riga. The Estonian fishing fleet has about 80 high-seas vessels with a total of 226,000 gross registered tons (GRT); its capacity exceeds the currently available fishery resources.

CONTENTS

I. Background 22
II. Fishing Fleet 22
A. High-seas Fleet 22
B. Fleet Reduction 25
C. Types of High-seas Vessels 25
D. Baltic Sea Fleet 26
III. Shipyards 26
IV. High-seas Fishing Grounds 26
V. High-seas Fishery Catch 27
VI. High-seas Fishing Companies 27
VII. Employment 29
VIII. Fishery Agreements 29
IX. Joint Ventures 30
X. Outlook 30
Sources 31
Endnotes 35
Appendices 37

I. BACKGROUND

Estonia is the smallest of the three Baltic republics both, in size and population. It has an area of roughly 45,000 square kilometers (km), including 2 large islands located in the Baltic Sea which together account for 8 percent of Estonia's land area. The country's population numbered 1.6 million inhabitants in 1992. This northern-most former Soviet Baltic republic has a coastline of 1,393 km, if calculated on the baselines alone. Including the coasts of all islands, however, Estonia's total coastline almost triples to 3,794 kilometers (about 2,357 miles).[1]

Estonia's fishing industry, based in the country's two marine ports at Tallinn and Parnu, employs about 30,000 people.[2] In 1991, Estonian fishermen landed 315,000 metric tons (t) of fish and shellfish, most of which was exported; approximately 90 percent was exported to the former Soviet Union. The entire catch was not used to produce edible fishery products only; over 20 percent was reduced to fishmeal (used in animal feeds) and fish oils.[3]

Estonians have always been fishermen and the fishing industry plays an important part in the country's economy, contributing almost 900 million rubles to the Estonian gross domestic product in 1991. The value of fishery exports in 1991 amounted to 775 million rubles, or over 85 percent of the total value of fisheries output.[4]

II. FISHING FLEET

The Estonian fishing fleet consisted of 210 fishing and fishery support vessels as the Soviet Union was breaking up in 1991. Of this total, 95 vessels fished on the high-seas and 115 in the Baltic.[5] Estonia's fleet comprised only about 28 percent of the 762 vessels based in the ports of the three former Soviet Baltic republics. According to the Nordic Investment Bank study, however, much of this fleet was aged and should have been retired.

By July 1993, the Estonian fishing fleet was greatly reduced and now numbers less than 150 vessels having in excess of 100 gross registered tons (GRT), with a total GRT of 236,000 tons. The high-seas fleet accounts for 96 percent of the entire tonnage, or 226,000 tons.

Table 1. Estonia. Fishing fleet, by selected vessel capacity, 1993.

Capacity	Number	GRT	Average GRT
Under 500 GRT	56	9,852	176
Above 500 GRT	90	225,713	2,508
Total	146	235,565	1,613

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

A. High-seas Fleet

In 1991, the Estonian state-owned, high-seas fishing fleet consisted of 95 vessels.[6] By November 1992, the active fleet was reduced to 75 vessels of various types, according to FAO.[7] This was 20 units less than the year before; their "disappearance" is explained in section B below.

The 90 vessels listed in table 1 as having over 500 GRT are most likely all engaged in high-seas fishing; (For a complete list of the vessels showing vessel names, type, GRT, country and year built, see appendix 1.)

HELSINKI
Finland
Gulf of Finland
Baltic
Sea
Paldiski
TALLINN
Kohtla-Järve
Narva
Hiiumaa
Estonia
Lake
Peipus
Russia
Saaremaa
Pärnu
Tartu
Võrts
Järv
Lake
Pskov
Gulf of Riga
Latvia
RIGA

B. Fleet Reduction

The Estonian fishing fleet has been reduced by 13 vessels during the past 2 years (appendix 2). Seven vessels, owned by the state-owned OOKEAN company, were sold to Indian and Pakistani companies, probably to be scrapped for iron. (Estonia itself does not have a vessel-scrapping facility.) Most of the vessels sold for scrap were 20 years old and older. The other six vessels were reflagged, mostly to former Soviet states. A large fishery training vessel, the *Kruzenshtern*, was reportedly returned to Russian operative control.[8] The total gross tonnage of sold (scrapped) and reflagged vessels amounts to almost 38,000 GRT, approximately 17 percent of the Estonian high-seas fleet tonnage. The stern factory trawler *Korall*, owned by the OOKEAN company, is no longer engaged in high-seas fishery operations. It is moored in Tallinn and serves as a training vessel for students of the local technical-vocational fishery school.[9]

This significant reduction of the Estonian distant-water fleet is not yet completed. In August 1993, four additional Estonian vessels were marked for sale, including 3 large stern factory trawlers. There has been buyer interest, but the contracts have not yet been signed. A small Baltic fishing vessel, the *Kirre*, is also on the block.[10] If and when these units are sold, another 8,000 gross tons of capacity will be eliminated from the Estonian high-seas fleet.

C. Types of High-seas Vessels

Estonia's distant-water fleet has 17 different classes of fishing and fishery support vessels. They are identified in appendices 3 and 4.

Most fishing vessels have between 2,000 and 3,000 gross tons and are owned by the OOKEAN high-seas fishing company in Tallinn. The medium-sized side and stern trawlers are mostly owned by former cooperatives (kolkhozes) that have been privatized.

The largest type in the Estonian fishing fleet is the giant floating cannery and fish-processing stern factory trawler of the MOONZUND class (appendix 2). With a gross tonnage of 7,700 tons and two engines (each having 31,600 horsepower), this vessel not only harvests fish itself, but can also freeze the catch and produce up to 26,000 standard cans a day (appendix 5). A relatively modern vessel, the MOONZUND class was built in the late 1980s in the VOLKSWERFT Shipyard in Stralsund, located in the former German Democratic Republic. Also known as the ATLANTIK-488 class, this freezer trawler can fish with both bottom and mid-water trawls and can operate on its own, or with a fisheries "expedition" in the proverbial seven seas of the world. Fish (either whole or processed) is frozen; bycatch and offal are reduced to fishmeal and fish oils. Medicinal fish oils are also produced. The finished products can be transferred at sea, or brought into port by the vessel itself.

Practically all Estonian fishing vessels were built in Soviet or East German shipyards. An exception ares the two Polish-built fish-processing baseships. These are larger (13,500 GRT) and longer vessels than the MOONZUND class, but they are much older (almost 30 years old) and less efficient. They also have no canning facilities. Built in Poland's Gdansk Shipyard, they are known as the B-64 or PIONERSK-class vessels.

D. Baltic Sea Fleet

A fleet of about 117 small trawlers, driftnetters, and longliners over 20 meters long operates in the Baltic Sea.[11] In 1991, the Baltic Sea fishermen harvested approximately 20 percent of Estonia's total fisheries catch, or about 80,000 tons.[12] The catch is mostly herring, sprat, cod, and salmon. An additional 500 small boats fish along the coast of the Baltic Sea.[13]

III. SHIPYARDS

High-seas fishing vessels are not built in Estonia. Some companies build small wooden and fiberglass rowboats, but these are not fishing vessels. Fishing nets are also not manufactured in Estonia; they have generally been imported from Russia. However, there are about 10 small companies that convert the nets into fishing traps/gear.[14]

IV. HIGH-SEAS FISHING GROUNDS

The Estonian high-seas fleet operates in the international waters of the Northwest Atlantic, beyond the Canadian 200-mile EEZ. The fishing in this area is governed by the North Atlantic Fisheries Organization (NAFO) which allocates the catch quotas to various countries. During NAFO's September 1992 Fourteenth Annual Meeting in Dartmouth (Canada), Russia, as the successor state to the Soviet Union, received an allocation of 37,300 t of various species, mostly redfish (27,000 tons).

In negotiations, following the conclusion of the Annual Meeting, Russia transferred 12,000 t of its 1993 ocean perch (redfish) quota to Latvia, Estonia, and Lithuania, with each country receiving a catch allocation of 4,000 tons. At the subsequent annual meeting, the Russian Federation obtained the 1994 catch allocation of 32,000 t, but its division among the Batlic countries has not yet been negotiated as of this writing.

Estonians fished in the Russian 200-mile zone in the Pacific while the country was still a part of the Soviet Union. The Latvian Ministry of Fisheries reported in July 1991[15] that a few Estonian vessels were idling in the Pacific because of a lack of diesel fuel. Currently, 2 Estonian vessels fish in the Pacific Russian 200-mile zone. The 775-GRT trawler *Paista* is fishing for cod and ocean perch, while the large stern factory trawler *Parallaks* is deployed as a freezing and transporting vessel in the Russian Far Eastern salmon fishery. Owned by the MAJAK company of Tallinn, both vessels are leased to an unspecified Kamchatka company.[16]

Other major areas where Estonian high-seas fishermen operate are off the Faroe Islands in the Northeast Atlantic, and off Mauritania and Namibia in the Southeast Atlantic. Recently, their operations were also noted in the Indian Ocean (where a joint venture with Indian interests is being planned) and in the Barents Sea.[17]

Two Estonian vessels belong to the TUNTSELOV (tuna hunter in Russian) class, but they are in effect stern trawlers. The Estonian fishermen do not harvest tuna.

V. HIGH-SEAS FISHERY CATCH

The Estonian high-seas fishing fleet landed only an estimated 110,000 tons in 1992, less than a half of the 1991 catch and less than a third of what was landed in the peak year of 1988 (appendix 6).

The high-seas catch remained fairly steady until 1989 (figure 1) at about 350,000 t per year, but it began to decline in 1990 (by 10 percent) and in 1991 (by 15 percent). In 1992, it decreased by 42 percent to only 110,100 t; the decline was caused by the political and economic turmoil that followed the country's declaration of independence in March 1990[18], and which was exacerbated by the formal dissolution of the Soviet Union in December 1991.

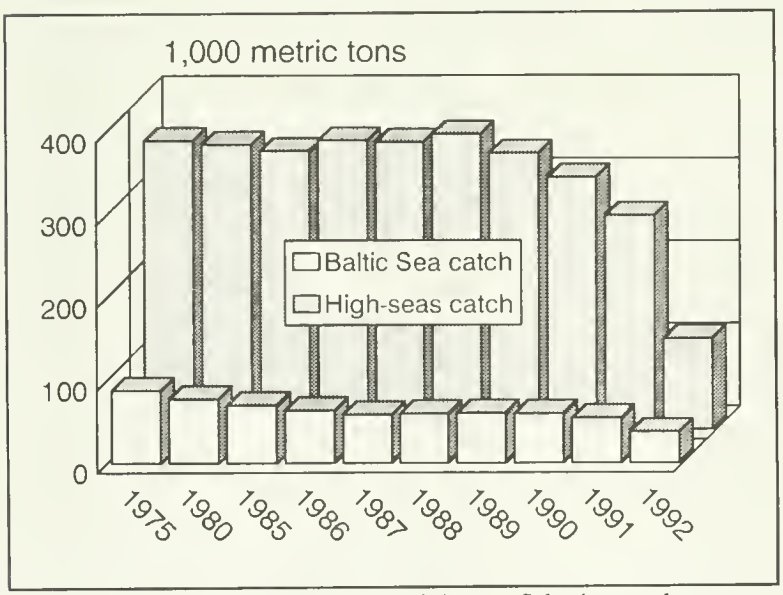


Figure 1.--Estonia. Baltic Sea and high-seas fisheries catch, by quantity; 1975-92.

VI. HIGH-SEAS FISHING COMPANIES

The largest Estonian distant-water fishing company is OOKEAN which owns the OOKEAN Trawler and Refrigeration Fleet, located in Tallinn. In August 1991, the company owned 57 fishing and fishery support vessels. By August 1993, the OOKEAN high-seas fleet had been reduced by 7 vessels; its current strength is thus 50 units with a total gross tonnage of 177,000 tons (appendix 3). Despite the Estonian Government's drive to privatize state-owned companies, OOKEAN is still formally Government-owned although its management is operating increasingly as a profit-making venture.

In 1992, OOKEAN's catch was 90,904 tons, of which 80 percent was exported. These exports were worth US$9.8 million; another US$2.5 milion was sold on the domestic market. The largest percentage of exports was sold to West African countries off whose coasts the company conducts fishing operations. About 15 percent of the exports were sold to CIS countries of which Russia took the largest amount, about 7 percent. This figure does not include exports to Latvia which equalled 0.2 percent of the total. For additional details on export sales, see figure 2.

Estonia's four former fishery kolkhozes, Majak, Saars Kalur, Parnu Kalur, and Hiiu Kalur annually contribute about 60,000 tons to the total catch. They fished in the Baltic and expanded into high-seas fisheries.

After independence, the fishery kolkhozes were privatized and converted into holding companies. These 4 former kolkhozes, and 2 newly organized private companies, own the remaining 24 Estonian high-seas vessels (appendix 4). The former kolkhozes were restructured into the following companies: the joint stock company MAJAK (located in Tallinn); the stock company DAGOMAR (Hiiumaa); the stock company MOONSUND SHIPPING (Saaremaa); and the leasing company VAAL (Parnu). The 2 small private companies, KALMAR and MARVEL, are both based in Tallinn.

The MAJAK fishing company owns 9 vessels (appendix 4). All are leased to other countries because MAJAK has discontinued high-seas fishing operations. Four of MAJAK's trawlers (*Kandova, Polva, Pirita*, and *Paljasaare*) have been leased to a Murmansk stockholding company named NORD and fish for cod in the Barents Sea. Two vessels (*Paistu* and *Parallaks*) are leased to a Russian Far Eastern fishing company and deployed in the Russian Pacific 200-mile zone.[19] The remaining two vessels (*Onekotan* and *Tiskre*), both large stern factory trawlers, have been leased to a company in Guinea-Bissau. The deployment of the small side trawler, *Kondopoga*, is not known. Since the lessees are not required to inform MAJAK company of any details about their catch, it is not known how much they are harvesting, or what species.

The DAGOMAR company's 3 medium stern trawlers (ZHELEZNYAKOV class) fished in the Barents Seas and off the West African country of Guinea-Bissau in 1992. DAGOMAR's 200 fishermen landed 6,300 t of various fish, for an average of over 30 t per fisherman. The targeted species were shrimp and cod in the Barents Sea, and sardines, carangids and octopus off Guinea Bissau.

The MOONSUND company also owns 3 medium stern trawlers of the ZHELEZNYAKOV class. They are fishing for shrimp in the Barents Sea in two joint ventures. The first one is with a newly-established private Estonian company KALMAR, which leased one trawler; the other two vessels are in a joint venture with a Russian company. In 1992, MOONSUND's vessels were deployed off Colombia under a contract concluded by SOVRYBFLOT (a Russian company which arranges joint ventures, fleet maintenance, and the export of fishery products), but that joint venture contract was not renewed in 1993.

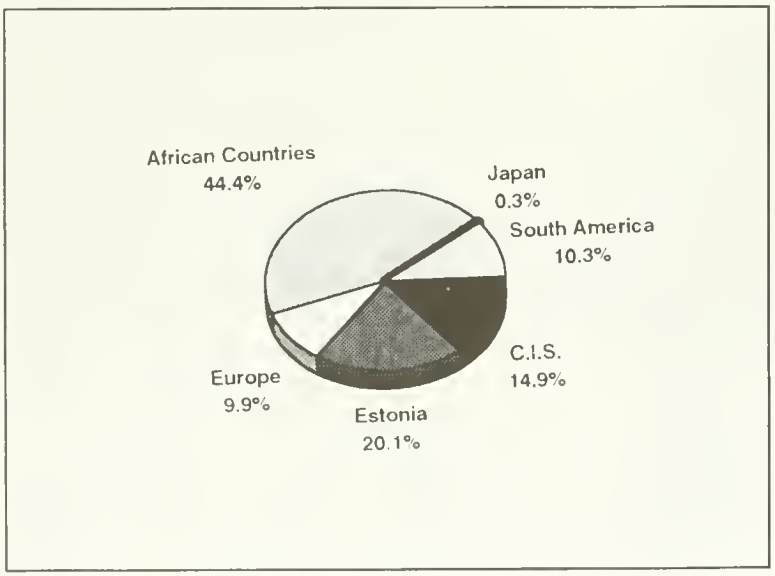


***Figure** 2.--Estonia. Distribution of fishery production, by percentage of total; 1992.*

In addition to the privatized former fishery cooperatives, 2 newly-established private companies operate 3 fishing vessels: the KALMAR company has 2, and the MARVEL company one.

The KALMAR company was organized as early as 1990, when Estonia was still a part of the Soviet Union, by a captain of a fishing vessel, Kaljo End, who became the Chairman of the Board of the new company. Starting in 1990 with one medium stern trawler (*Rotalia*) which was bought from the Laane Kalur kolkhoz, the company leased a second one (*Sorve*) from the MOONSUND company, a privatized former kolkhoz, and plans to buy or lease several more vessels in the future. The company's fishermen harvest shrimp in the international waters of the Barents and Greenland Seas where there are no fishing catch quotas.[20] The catch of about 800 t per vessel is sold in Norway where the company also purchases diesel oil. Captain End, who for years has been fishing in the Northeast Atlantic, not only knows the fishing grounds well, but also has at his disposal valuable research data secured by the fishery exploratory vessels of SEVRYBA's (Russia's Northern Fishery Administration) Exploratory Service (PROMRAZVEDKA). The KALMAR company is profitable and expanding.

Information on the MARVEL company is not available.

VII. EMPLOYMENT

Estonian fisheries reportedly employed 30,000 persons in 1991; about 4,300 fishermen fished on the high-seas, the remainder was employed in the Baltic fisheries, in the processing industry, fish marketing, trade, etc. Estonia's fisheries thus provide employment for about 2 percent of the nation's total population which is estimated at approximately 1.6 million inhabitants. Fisheries was thus an important part of the country's economy.

The state-owned OOKEAN high-seas fishing company currently has 3,915 employees. Most are deep-sea fishermen and crews (3,114 persons); 280 persons, less than 9 percent of the total, are in administrative positions and the remaining 521 employees work in supply, building maintenance and other support jobs.[21]

The privatized fishery kolkhozes employ about 3,000 persons of which less than a half (an estimated 1,200 fishermen and crews) fish on the high-seas (appendix 7).[22]

VIII. FISHERY AGREEMENTS

On January 10, 1992, a protocol was signed in Riga to regulate the fisheries in the neighboring Russian and Estonian zones until a bilateral agreement on respective relations in fisheries could be signed. This protocol allowed Estonia to fish for cod and shrimp in the Russian 200-mile Exclusive Economic Zone (EEZ) in the Baltic and Barents Seas, while the Russians were allowed to fish Baltic herring and Baltic sprat in the Estonian EEZ. Russian officials, however, argue that they do not need the fishery in the Estonian EEZ in the Baltic and have little to gain from a bilateral fisheries agreement; so it is possible that the Russian Federation will let the protocol expire and no longer allow Estonia to fish in the Barents Sea.[23] In May 1992, negotiations continued in Moscow on a draft

agreement.[24] According to the U.S. Embassy in Tallinn, an agreement had still not been concluded by October 1993. Reportedly, the two sides differ only on the issue of fishing in Lake Peipsi (a freshwater lake on the Estonian-Russian border).

On July 14, 1992, Estonia initialed the draft of a bilateral fisheries agreement with the European Community (EC).[25] According to the U.S. Embassy in Tallinn, the agreement became effective after it was signed by the Estonian Foreign Minister, Trivimi Velliste, on July 16, 1993.

At the end of January 1992, a quadripartite agreement was signed in Stockholm between Sweden and the fishery administrators of Estonia, Latvia, and Lithuania. The document defines the contested fishing grounds in the coastal areas of the Baltic Sea. An estimated 75 percent of fishery stocks in the area will be managed by the Baltic states.[26]

Estonia also concluded a bilateral agreement with the Faroe Islands (with the consent of Denmark). The agreement provides Estonian fishermen with a 1993 catch quota of 6,000 t of blue whiting in the Faroese EEZ in exchange for giving Faroese fishermen a 1993 catch quota of 2,000 t for various species in the Estonian EEZ in the Baltic.[27]

IX. JOINT VENTURES

In August 1993, the Estonian Government gave its permission to the state-owned OOKEAN company to establish an Estonian-Indian joint venture, Fortune Oceanic Products, Ltd., with the Indian firm, Fortune International, Ltd. Estonia will own 49 percent of the shares of this J/V company whose central office will be located in New Delhi, India. OOKEAN will supply the new J/V with 2 ORLENOK-class trawlers and their crews, while the Indian Government will provide tax breaks, partially cover fuel costs for the fishing vessels, and give the firm a license to fish in Indian territorial waters.[28] The two companies are currently negotiating the final contract.

X. OUTLOOK

Since independence, it has become clear that the size and capacity of Estonia's fishing fleet, as well as its fish-processing industry, exceed the availability of fishery resources. The loss of the traditional foreign fishing grounds where Estonia was allowed to fish as a constituent Republic of the Soviet Union, is the main reason for overcapacity.

Almost a half of OOKEAN company's trawler fleet reportedly stood idle in April 1993 in Tallinn because of insufficient catch quotas, difficulties in accessing fishing grounds in foreign waters, and the high cost of purchasing diesel fuel.[29] This is not a problem given to an easy solution as indicated by the fact that the company is attempting to further reduce its fleet by offering for sale 3 large stern factory trawlers. OOKEAN will need to establish more joint ventures like the one planned with an Indian company to improve the utilization of its fleet.

The most pressing problem is the availability of funds to purchase diesel fuel. The ever-increasing prices of fuel have rendered the operations of the high-seas fleet costlier. Whereas in the Soviet system the

cost of diesel fuel represented barely 15 percent of the operational costs of the fleet, under the free-market system, fuel now represents over 50 percent of the total costs (and in some cases as much as 70 percent) of the Estonian high-seas fishing fleet.[30]

Despite serious problems, the outlook for the Estonian fishing industry is not entirely unfavorable. The new fishing managers promptly began reducing the oversized fleet and, during the past two years, sold for scrap, reflagged, or otherwise decommissioned 18 percent (41,000 tons) of the total high-seas gross registered tonnage (225,000 tons). They also seem to be adept at forming joint ventures and finding markets for their products. Helping to maintain the productivity and economic efficiency of the high-seas fleet is the fact that its vessels are of relatively recent vintage. The average age of the fleet, according to Lloyd's of London, was 14 years on December 31, 1992.

The successful transfer of Government-owned assets of the fishery cooperatives (kolkhozes) to private companies is an additional factor boding favorably for the future of the Estonian fisheries. The largest company, OOKEAN, however, remains government-owned. Its assets are so large that private funds can not be found for its purchase. The discontinuation of government subsidies, however, has forced the company to increasingly operate as a private enterprise geared towards covering its costs and making a profit.

If the Estonian fishing companies can continue exporting a large portion of their catch, thereby earning hard currencies, they will be able not only to secure fuel for continued distant-water operations, but may even find sufficient funds to modernize existing vessels and save for the eventual replacement of the old fishery vessels. This modern new fishing fleet, however, will have to be much smaller and more efficient than it is today.

SOURCES

Estonian Republic. *List of the Ships of the Estonian Fishing Company OOKEAN*. Tallinn, 1991 and 1993.

FAO. Fishery Country Profile. *Estonia*. Rome, November 1992.

National Technical Information Service. *Estonia: An Economic Profile*. Washington, D.C., July 1992.

Nordic Investment Bank. Baltic study. September 1991.

U.S. Embassy, Tallinn. Personal Communications. 6 August, 2, 3, 14, & 30 September, 1993.

U.S. Navy, Office of Naval Intelligence. 29 July 1993.

Photo 1.-- The 635-gross ton Zhelezhnyakov-class trawler is used by Estonian fishermen.

Photo 2.-- The Estonian fleet has 7 Orlenok-class stern factory trawlers with a gross tonnage of 1,900 GRT.

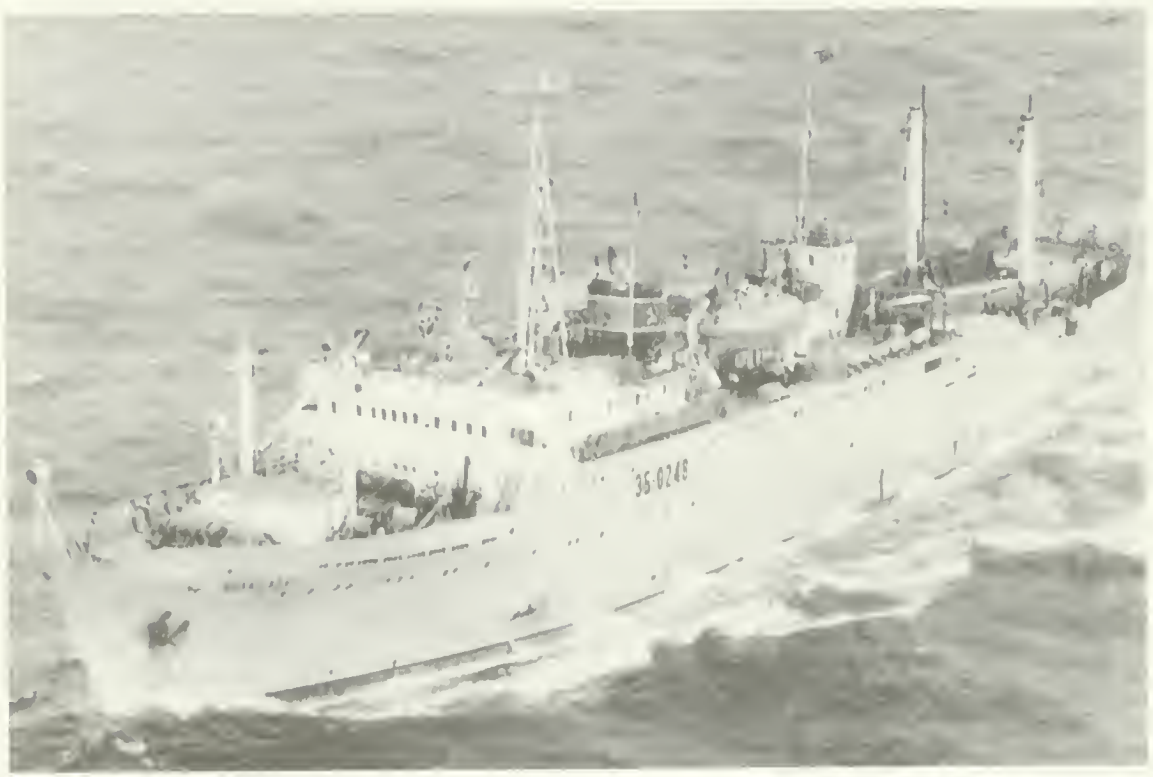


Photo 3.--The Estonian factory trawler, Johann Koler, a Mayakovskyi-class trawler having 2,400-GRT was recently fishing in the southwestern Atlantic off the Falkland Islands and Argentina.

ENDNOTES

1. National Technical Information Service. *Estonia: An Economic Profile*. Washington, D.C., July 1992.

2. FAO, Fishery Country Profile. *Estonia*. Rome, November 1992. The figure of 30,000 employees in the Estonian fishing industry is probably inflated and includes persons who worked in the former fishing kolkhozes, their families, and possibly individuals who weren't directly involved in fishing activities. A more realistic figure is probably about 15,000 employees.

3. Ibid; Estonian Fishing Agency, September, 1993.

4. Ibid.

5. Nordic Investment Bank. Baltic study. September 1991.

6. Ibid.

7. FAO, Fishery Country Profile. *Estonia*, Rome, November 1992.

8. Seized by the victorious Red Army from Nazi Germany after the end of World War II, the *Kruzenshtern* was for years used by the Soviet Ministry of Fisheries to train cadets from fishery schools and the merchant marine academy. It visited the United States several times. The most memorable of these visits was the one to Newport, Rhode Island, in 1976 for the jamboree of "tall ships" celebrating the 200th anniversary of the founding of the United States. The *Kruzenshtern's* home port was Tallinn until December 1991, when it left for the port of Baltiisk near Kaliningrad. It is now assigned to the Kaliningrad Fisheries College.

9. U.S. Embassy, Tallinn, Personal Communication, 2 September 1993.

10. U.S. Embassy, Tallinn, Personal Communication, 10 August 1993.

11. FAO, Fishery Country Profile. *Estonia*, Rome, November 1992. This figure of 115 given by FAO is at slight variance with the 117 vessels of the Baltic fleet mentioned in the NIB's 1991 study, but the difference of 2 vessels is small enough to be insignificant. The ONI list (appendix 1) shows only 56 vessels of between 100 and 500 GRT, many of which are believed to be operating in the Baltic, especially the BALTIKA and KARELIA classes. The other Estonian vessels fishing in the Baltic probably have a gross tonnage below 100 tons, and were, therefore, not included in ONI's list.

12. Ibid.

13. Lauri Vaarja, "The Fishery Industry in Estonia." Published in *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia.* (London, Agra Europe, 1993), p. 61.

14. U.S. Embassy, Tallinn, Personal Communication, 10 August 1993.

15. Radio Riga, 12 July 1991.

16. U.S. Embassy, Tallinn. Personal Communication, 2 September, 1993.

17. Ibid.

18. Estonia's independence was not officially recognized by Moscow until September 6, 1991 following the unsuccessful coup d'etat in Moscow in August 1991.

19. The name of the Russian company and the terms of its contract with MAJAK are not known.

20. In 1992, the KALMAR vessels harvested shrimp in the Russian 200-mile zone in an arrangement with SEVRYBA (Russia's Northern Fishery Administration) which, however, was not prolonged in 1993.

21. U.S. Embassy, Tallinn, Personal Communication, 30 September 1993.

22. Ibid. The figures appear too high judging from the number of vessels these companies own.

23. *Rybatskie Novosti* (Moscow), No. 20, June 1993, p. 2.

24. Radio Tallinn, 7 May 1992.

25. *Eurofish Report*, 30 July 1992.

26. Radio Russia, 27 January 1993.

27. Faroese Statistical Bulletin, May 1993.

28. Baltic News Service, 29 August 1993.

29. *Rybatskie Novosti* (Moscow), No. 12, April 1993, p. 7.

30. U.S. Embassy, Tallinn, Personal Communication, 10 August 1993.

APPENDIX SECTION

Appendix 1. Estonia. Fishing and fishery support fleet, by vessel name, class, gross registered tonnage, and country and year of construction; 1993.

Vessel name	Class	GRT	Country built	Year
Agnes		100	USSR	1968
Amandus Adamson	PROMETEY MOD A	3,977	GDR	1981
Anna Haava	MAYAKOVSKIY	3,170	USSR	1969
Askele	ZELENODOLSK	863	USSR	1966
August Kork	TAVRIYA	3,555	USSR	1967
Bester	MANEVRENNYY	163	USSR	1984
Carolin	ALPINIST	720	USSR	1973
Derzhavinsk	ZHELEZNYAKOV	648	USSR	1975
Dromia	LEDA	249	Poland	1985
Eerika	ORLENOK	1,513	GDR	1985
Eestirand II	MOONZUND	7,765	GDR	1990
Ella	TUNISELOV 1	280	USSR	1986
Elva	PROMETEY MOD A	3,977	GDR	1982
Emma	TUNTSELOV 1	265	USSR	1982
Fryderyk Chopin	PIONERSK	14,368	Poland	1965
Georg Kask	MOONZUND	7,765	GDR	1989
Georg Lurich	MOONZUND	7,656	GDR	1989
Harju	ZHELEZNYAKOV	635	USSR	1977
Harku	PROMETEY MOD A	3,147	GDR	1982
Heinaste	MOONZUND	7,765	GDR	1990
Hiiumaa	ZHELEZNYAKOV	775	USSR	1979
Hiiurand	ZHELEZNYAKOV	775	USSR	1977
Hobulaid	LUCHEGORSK	2,323	USSR	1970
Ihasalu	ALPINIST	720	USSR	1983
Iklarand	ZHELEZNYAKOV	775	USSR	1979
Island	TAVRIYA	3,555	USSR	1965
Jaan Koort	MAYAKOVSKIY	2,351	USSR	1968
Jakob Hurt	KRONSHTADT	2,327	USSR	1976
Jarve	KIROVETS	190	USSR	1989
Johann Koler	MAYAKOVSKIY	2,407	USSR	1968
Juhan Liiv	MAYAKOVSKIY	3,170	USSR	1968
Juhan Smuul	ATLANTIK	2,154	GDR	1972
Kadri	ORLENOK	1,513	GDR	1986
Kagu	KARELIYA	180	USSR	1975
Kalarand	ZELENODOLSK	863	USSR	1968
Kaleste	MAYAK	676	USSR	1967
Kandova	ORLENOK	1,895	GDR	1986
Karl Ristikivi	LUCHEGORSK	2,323	USSR	1971
Kastor	KREVETKA MOD A	149	USSR	1981
Kaunispea	BALTIKA	108	USSR	1976
Keibu		117	USSR	1985
Khiiyesaare	BALTIKA	108	USSR	1977
Khybesaare	BALTIKA	108	USSR	1977
Kihelkonna		117	USSR	1985
Kiipsaar	LAUKUVA	359	USSR	1990
Kirre	KARELIYA	180	USSR	1975
Kondopoga	MAYAK	600	USSR	1971
Kootsaare	BALTIKA	108	USSR	1975
Kootsaare		117	USSR	1990
Kopli	OKEAN	508	GDR	1959
Korgessaare		117	USSR	1985
Kose	OKEAN	507	GDR	1959
Kreutzwald	TAVRIYA	3,556	USSR	1968
Kristjan Raud	MAYAKOVSKIY	3,170	USSR	1965
Kruzenshtern *	SEDOV	3,545	FRG	1926
Kuba	RR 151	258	GDR	1955
Kuressaare		117	USSR	1985
Kurtna	PROMETEY MOD A	3,977	GDR	1983
Kyrgesaare	BALTIKA	108	USSR	1977
Lahemaa	LUCHEGORSK	2,833	USSR	1975
Langust	MAYAK	699	USSR	1966
Lao	BALTIKA	117	USSR	1984
Leemeti	ZHELEZNYAKOV	775	USSR	1986
Lehtma	ZHELEZNYAKOV	775	USSR	1987
Lembit Parn	PROMETEY	3,017	GDR	1976
Lennuki	RR 151	255	GDR	1953
Leppneeme		117	USSR	1985
Lindi	KARELIYA	206	USSR	1968
Liu	BALTIKA	117	USSR	1984
Makhu	OKEAN	507	GDR	1960
Malle	MANEVRENNYY	164	USSR	1975
Malusi		100	USSR	1967
Maret	ORLENOK	1,898	GDR	1984
Mari	ORLENOK	1,898	GDR	1984
Marie Under	LUCHEGORSK	2,323	USSR	1974
Marina	OMA	141	USSR	1959

Appendix 1. Estonia. Continued.

Vessel name	Class	GRT	Country built	Year
Mart Saar	MAYAKOVSKIY	3,170	USSR	1969
Matsalu	ALPINIST	720	USSR	1982
Miidurand	ZHELEZNYAKOV	635	USSR	1976
Moonsund	MOONZUND	7,656	GDR	1986
MRTK 3250	BALTIKA	108	USSR	1977
Mustjarv	PROMETEY	3,019	GDR	1974
Narvia		117	USSR	1991
Neeme		100	USSR	1967
Olemiste	ATLANTIK	2,117	GDR	1970
Ontika	ORLENOK	1,513	GDR	1986
Orissaare	OKEAN	507	GDR	1960
Oskar Luts	KRONSHTADT	2,327	USSR	1976
Paistu	ZHELEZNYAKOV	775	USSR	1980
Palamuse	ORLENOK	1,895	GDR	1986
Paljassaare	ZHELEZNYAKOV	635	USSR	1978
Parallaks	KOSMOS	2,944	Poland	1967
Peipsi	PROMETEY	3,019	GDR	1973
Pingviin		100	USSR	1967
Pirita	ZHELEZNYAKOV	775	USSR	1988
Polva	ORLENOK	1,513	GDR	1986
Pringi		117	USSR	1989
Ramsi		117	USSR	1985
Rand 1	KASPIY	1,058	GDR	1970
Rand 2	KASPIY	1,058	GDR	1970
Rand 3	KASPIY	1,058	GDR	1970
Rand 4	KASPIY	1,058	GDR	1970
Raudoja		117	USSR	1985
Reigi		100	USSR	1968
Reiu		117	USSR	1991
Ridala		117	USSR	1988
Rinksu	KARELIYA	206	USSR	1968
Ristna 2	OKEAN	507	GDR	1960
Rotalia	ZHELEZNYAKOV	635	USSR	1979
Rudolf Sirge	LUCHEGORSK	2,323	USSR	1973
Saadjarv	PROMETEY	3,019	GDR	1974
Saaremaa	ZHELEZNYAKOV	775	USSR	1982
Salmistu		117	USSR	1977
Sangelaid	LAUKUVA	359	USSR	1986
Sekstant	PROMETEY MOD A	3,147	GDR	1981
Selenga	BOLOGOYE	334	USSR	1958
Sindi	ZHELEZNYAKOV	775	USSR	1985
Soela	LUCHEGORSK	2,581	USSR	1973
Sorgu	GIRULYAY	282	USSR	1981
Sorve	ZHELEZNYAKOV	635	USSR	1981
Stanislaw Moniuszko	PIONERSK	14,368	Poland	1965
Stralsund	MOONZUND	7,765	GDR	1988
Tahkuranna	ZHELEZNYAKOV	635	USSR	1980
Tammsaare	LUCHEGORSK	2,833	USSR	1975
Tamula	PROMETEY	3,017	GDR	1975
Tibriku	GIRULYAY	282	USSR	1983
Tipton	LEDA	230	Poland	1985
Tiskre	KRONSHTADT	2,327	USSR	1976
Toila	LAUKUVA	359	USSR	1990
Tom	BOLOGOYE	334	USSR	1958
Topu	BALTIKA	108	USSR	1984
Tori	OKEAN	507	GDR	1959
Treimani	ZHELEZNYAKOV	635	USSR	1977
Udria		117	USSR	1988
Undva	OKEAN	507	GDR	1960
Uzventis	LAUKUVA	359	USSR	1987
Vagula	PROMETEY	3,932	GDR	1975
Vahur	ORLENOK	1,898	GDR	1984
Vaivara	BALTIKA	117	USSR	1986
Valgejarv	PROMETEY	3,017	GDR	1977
Vapper	PROMETEY	3,019	GDR	1974
Velise	BOLOGOYE	334	USSR	1961
Vergi	RR 151	255	GDR	1952
Vergi	BALTIKA	117	USSR	1984
Viru		117	USSR	1989
Virumaa	MAYAKOVSKIY	2,690	USSR	1968

TOTAL = 146 fishing vessels TOTAL GROSS TONNAGE - 235,565 GRT

Source U S Navy, Office of Naval Intelligence, 29 July 1993

* In December 1991, the *Kruzenshtern* was moved to the port of Baltiisk, near Kaliningrad and is now part of the Russian fleet
FRG - Federal Republic of Germany

Appendix 2. Estonia. OOKEAN company's fishing fleet reduction, by disposition: 1993.

Vessel name	Class	GRT	Year Built	Built In	New Owner
VESSELS SOLD (7 vessels)					
Olemiste	ATLANTIK II	2,117	1970	GDR	*
Johan Koler	MAYAKOVSKII	2,407	1968	USSR	*
Jaan Koort	MAYAKOVSKII	2,351	1968	USSR	*
Mart Saar	MAYAKOVSKII	3,170	1969	USSR	*
Harju	ZHLEZHNYAKOV	635	1977	USSR	*
Sajaanid	TAVRIYA	3,180E	1965	USSR	*
August Kork	TAVRIYA	3,555	1967	USSR	*
TOTAL		17,415			
VESSELS REFLAGGED (6 vessels)					
Ave	N/A	104	1984	USSR	Ukraine
Botnijos Ilanka	AMURSKII ZALIV	12,891	1970	France	Lithuania
Kabli	OKEAN	507	1960	GDR	Panama**
Saturn	N/A	104	1985	USSR	Lithuania
Vetrasputns	TAVRIYA	3,308	1962	USSR	Latvia
Kruzenshtern	SEDOV	3,545	1926	Germany	***
TOTAL		20,459			
VESSELS DECOMMISSIONED (1 vessel)					
Korall	MAYAKOVSKII	3,170	1964	USSR	†
VESSELS FOR SALE (4 vessels - as of August 1993)					
Juhan Liiv	MAYAKOVSKII	3,170	1968	USSR	@
Marie Under	LUCHEGORSK	2,323	1974	USSR	@
Kirre	KARELIA	180	1975	USSR	@
Juhan Smuul	ATLANTIK II	2,154	1972	USSR	@
TOTAL		7,827			

TOTAL = 18 vessels TOTAL GROSS TONNAGE = 48,871 GRT

Sources: U.S. Navy, Office of Naval Intelligence, 29 July 1993 (for vessels reflagged).
Estonian Republic. *List of the Ships of the Estonian Fishing Company OOKEAN*. Tallinn, 1993.
U.S. Embassy, Tallinn, Personal Communication, August 10, 1993 (for vessels sold)

E - Estimated
N/A - Not available

* These vessels were sold to Indian and Pakistani intermediaries and probably scrapped for iron
** Although now under Panamanian flag, this vessel reportedly still belongs to Estonia
*** This vessel, a training "tall ship" for students from fishery colleges and technical schools, is reportedly operated by the Russian Federation
† The former large stern factory trawler *Korall* is moored in the Tallinn port and serves as a training vessel for fishery school students.
@ These vessels are idling in port while awaiting a buyer

Appendix 3. Estonia. OOKEAN Company's Trawler and Refrigeration Fleet, by type and class of vessels, number of vessels owned, and gross registered tonnage; 1993.

Type/class of vessels	Number	Gross tonnage	
		Per vessel	Total
Trawlers			
BATM MOONZUND	6	7,704	46,224
RTMS PROMETEI	13	3,017	39,221
RTMS ATLANTIK II	1*	2,154	2,154
BMRT MAYAKOVSKII	5**	3,170	19,020
BMRT PIONER LATVII	4	2,666	10,664
STM ORLENOK	7	1,898	13,286
BMRT LUCHEGORSK	3*	2,973	8,919
BMRT KRONSHTADT	2	2,326	4,652
MKTM LAUKUVA	2	359	718
STM KARELIA	2*	187	374
STM ALPINIST	2	710	1,400
TOTAL	47		146,632
Support Vessels			
Motherships - PIONERSK	2	13,600	27,200
Processing - TAVRIYA	1	3,556	3,556
TOTAL	3		30,756
GRAND TOTAL	50		177,388

Source: Estonian Republic. List of the Ships of the Estonian Fishing Company OOKEAN. Tallinn, 1993.

* One of these vessels is sitting idle in port waiting to be sold.
** One of these vessels is a training vessel.
BATM - Bolshoi avtonomnyi trauler morozilnyi (Large autonomous freezer trawler)
RTMS - Rybolovnyi trauler morozilnyi srednii (Medium freezer fishing trawler)
BMRT - Bolshoi morozilnyi rybolovnyi trauler (Large freezer fishing trawler)
STM - Srednii trauler morozilnyi (Medium freezer trawler)
MKTM - Malyi krevetkolovnyi trauler morozilnyi (Small fish-shrimp freezer trawler)

Appendix 4. Estonia. Fishing vessels owned by privatized fishery kolkhozes and companies; 1993.

Vessel name	Class	Gross tonnage	Year built
MAJAK JOINT STOCK COMPANY (located in Tallinn)			
Kondopoga	MAYAK	600	1971
Kandova	ORLENOK	1,895	1986
Polva	ORLENOK	1,895	1986
Paistu	ZHELEZNYAKOV	775	1980
Paljassaare	ZHELEZNYAKOV	775	1978
Pirita	ZHELEZNYAKOV	775	1988
Parallaks	KOSMOS	2,944	1967
Tiskre	MAYAKOVSKII	2,326	1967
Onekotan*	KOSMOS	2,934	1967
	Total	14,919	
DAGOMAR STOCK COMPANY (Hiiumaa)			
Hiiurand**	ZHELEZNYAKOV	775	1977
Leetmeti	ZHELEZNYAKOV	775	1986
Lehtma	ZHELEZNYAKOV	775	1987
Undva*	OKEAN	507	1960
Hiiumaa	ZHELEZNYAKOV	775	1979
	Total	3,607	
MOONSUND STOCK COMPANY (Saaremaa)			
Kopli***	OKEAN	508	1958
Saaremaa	ZHELEZNYAKOV	775	1982
Sindi	ZHELEZNYAKOV	775	1985
Sorve	ZHELEZNYAKOV	635	1981
	Total	2,693	
VAAL LEASING COMPANY (Parnu)			
Sangelaid	LAUKUVA	359	1986
Uzventis	LAUKUVA	359	1987
Iklarand	ZHELEZNYAKOV	775	1979
Tahkuranna	ZHELEZNYAKOV	635	1980
Treimani	ZHELEZNYAKOV	635	1977
	Total	2,763	
KALMAR (Tallinn)			
Rotalia	N/A	N/A	N/A
Sorve	ZHELEZNYAKOV	635	1981
MARVEL (Tallinn)			
N/A	N/A	N/A	N/A

GRAND TOTAL = 25 vessels TOTAL GROSS TONNAGE = 22,939 GRT

Sources: U.S. Navy, Office of Naval Intelligence, 29 July 1993; U.S. Embassy, Tallinn, 6 August and 2 September 1993.

* To be eventually sold for scrap iron.
** Sold to a Russian fishing company in Murmansk
*** Sold to a United Kingdom company for scrap in 1993.

N/A - Not available

Appendix 5. Estonia. Fishing and fishery support vessels by class, age, length, and production capacity; 1991.

Vessel by class	Year(s) built	Built in	Age (years)	Length (meters)	Production Capacity/day: Frozen (tons)	Fishmeal (metric tons)	Canned (1,000 cans*)
Fishing Vessels							
MOONZUND	1985-90	Stralsund	3-8	120.4	63	10	26
PROMETEI	1973-83	Stralsund	10-20	101.8	63	10	-
ATLANTIK II	1970	Stralsund	23	82.0	50	6	-
MAYAKOVSKII	1968-69	Stralsund	24-25	84.7	30	2	-
PIONER LATVII	1970-73	Nikolaev I	20-23	83.9	45	6	-
LUCHEGORSK	1973-75	Klaipeda	18-20	83.6	30	12	-
KRONSHTADT	1976	Nikolaev I	17	83.8	40	5	-
ORLENOK	1984-6	Stralsund	17-19	62.2	30	2	-
LAUKUVA**	1990	Petrozavodsk	3	35.7	8	-	-
KARELIA	1975	Petrozavodsk	18	31.6	-	-	-
ALPINIST	1982-83	Yaroslavl'	19-20	53.7	-	-	-
Fishery Support Vessels							
PIONERSK	1965	Gdansk	28	164.0	100	18	-
TAVRIYA	1965-67	Nikolaev II	26-28	99.4	50	-	-

Source: Estonian Republic. List of the Ships of the Estonian Fishing Company OOKEAN. Tallinn, 1991.

* Standard cans of 250 grams each.
** Fish-shrimp freezer trawler.

Shipyards:
Klaipeda - Baltiya Shipyard
Stralsund - Volkswerft (People's Shipyards)
Nikolaev I - Chernomorskii Sudostroitel'nii Zavod (Black Sea Shipbuilding Plant)
Nikolaev II - Imeni 61 Kommunara Sudostroitel'nii Zavod (61 Kommunar Shipbuilding Plant)
Petrozavodsk - Avangard Shipyard

Appendix 6. Estonia. Inland, coastal, and high-seas fisheries catch; 1975, 1980, and 1985-1992.

Area	Year: 1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric tons									
Inland	3.1	4.7	3.2	5.9	4.4	4.2	4.0	2.4	2.0	3.2
Coastal	87.7	77.3	69.7	63.4	58.1	59.5	60.0	59.3	54.0	37.2
High-seas										
OOKEAN Co.	302.8	287.1	275.2	294.5	273.9	298.8	276.4	255.7	230.4	90.9
Other	47.1	58.2	62.1	55.6	74.3	58.7	58.1	49.7	28.7	19.2
Subtotal	349.9	345.3	337.3	350.1	348.2	357.5	334.5	305.4	259.1	110.1
Total	440.8	427.3	410.2	419.4	410.7	421.2	398.5	367.1	315.1	150.5

Source: Estonian Fishing Agency, September, 1993.

Note: The 1991 and 1992 catch might be higher than the catch shown in this table. Landings statistics are unreliable and some catch landed in smaller Estonian reports may not have been recorded.

Appendix 7. Estonia. Employment in privatized former collective fishery cooperatives (kolkhozes) and in private companies; September 1993.

Company	High-seas Fishermen	Other	Total
Cooperatives			
DAGOMAR	210	229	439
MOONSUND	N/A	N/A	N/A
MAJAK	500(E)	N/A	1,000(E)
VAAL	N/A	N/A	N/A
Private Companies			
KALMAR	24	N/A	N/A
MARVEL	N/A	N/A	N/A
TOTAL	1,200(E)	N/A	3,000(E)

Source: Economic Section, U.S. Embassy, Tallin, Personal Communication, September, 1993.
N/A - Not available E - Estimated

2.3

LATVIA

Latvia has recently become independent after being part of the Soviet Union for almost five decades. Latvia's fishing industry, which was part of the centrally planned economy, directed by the Soviet Ministry of Fisheries in Moscow, had to readjust quickly to the new free-market demands. Latvia also had to secure arrangements for access to fishing grounds in foreign 200-mile zones. Most importantly, it can no longer count on cheap, subsidized diesel oil, but has to purchase it with foreign currencies. The difficult transition from a command to a free-market economy has been exacerbated by the need to reorganize the administrative staff following the dissolution of the Soviet Western Fisheries Administration in Riga. Among the most important factors for the future profitability of the Latvian fishing industry is the privatization program which its Government has begun.

CONTENTS

I. Background 45
II. Fishing Fleet 46
A. 1991 46
B. 1992 49
C. 1993 49
III. High-seas Fleet Dispersal 50
IV. Fishery Support Fleet 53
V. Fleet Reduction 53
VI. Fishing Grounds 53
VII. Catch and Production 54
VIII. Fishing Companies 54
IX. Bilaterals and Joint Ventures 55
X. Outlook 56
Sources 56
Endnotes 57
Appendices 59

I. BACKGROUND

Latvia, one of the three Baltic countries which became independent in 1991, has a population of 2.7 million people. Its land area encompasses 64,600 square kilometers, while its coastline extends for 531 kilometers. Over one third of the population lives in the capital, Riga, which has 915,000 inhabitants.

A leading traditional sector in the Latvian economy, the fishing industry used to employ 48,000 persons, according to the Latvian Ministry of Maritime Affairs[1]. The Latvian fishing industry is based mostly in the fishing port of Riga. The other port, extensively used by the fishing industry, is located at Liepaja.

The fishing industry contributed almost 500 million rubles to the Latvian economy in 1990. The value of fishery exports amounted to 359 million rubles, which represented 75 percent of the total volume of fisheries output.[2]

II. FISHING FLEET

The Latvian fishing fleet consisted of 351 fishing and fishery support vessels as the Soviet Union was breaking up in 1991. The three Baltic Soviet republics each had their own fishing fleet. Latvia's fleet was by far the largest, comprising almost 50 percent of the 762 vessels based in the ports of the Baltic republics.[3]

The high-seas fleet, owned by the Government, is fishing primarily in the Atlantic, both northern and southern. The principal fishing grounds are off Canada, Mauritania, Nigeria, the Faroe Islands and Russia. The Government, however, is exploring the possibility of concluding additional agreements with other coastal countries. The main species landed by the high-seas fleet are mackerel, horse mackerel, squid, and redfish. The Latvian high-seas fishing fleet consists of 3 different types of vessels: distant-water trawlers, fish-processors, and refrigerated transports.

Latvia also has a coastal fleet of small tonnage vessels, privately owned by fishermen's cooperatives. Their owners fish the Baltic Sea, both in the Latvian Exclusive Economic Zone (EEZ), and in the EEZs of other Baltic countries with whom Latvia has concluded bilateral fishery agreements. Sprat and cod are the principal species landed from Baltic waters.

A. 1991

The Latvian fleet, operating for 40 years under the system of the Soviet expeditionary fishing fleets, organized its own fishing expeditions consisting of high-seas trawlers supported by motherships, fish-processors, tankers, water supply vessels, and other support craft.

Photo 1.--A 14,00-GRT processsing baseship, built in Russia supplies Latvian high-seas fishermen.

This fleet was fishing under the overall command of the Western Fisheries Administration (ZAPRYBA). A ZAPRYBA fleet commander, usually located aboard one of the large motherships, was responsible for day-to-day operations and for the transfer of fish to motherships for processing, or to refrigerated transports for delivery to home ports.

Latvia

Geographic Indicators
Total area: 64,100 km²
Land boundaries: 1,078 km
Coastline: 531 km
Natural resources: Amber, Peat, Limestone, and Dolomite

Demographic Indicators, 1991
Population: 2,728,937
Growth rate: 0.6%
Birth rate: 14 births per 1,000 population
Death rate: 11 deaths per 1,000 population
Life expectancy: 65 years male, 75 years female
Ethnic composition: Latvian 51.8%, Russian 33.8%, Byelorussian 4.5%, Other 9.9%

Political Indicators
Capital: Riga
Independence: declared independence 21 August 1991, regained independence from the Soviet Union on 6 September 1991
Chief of State: President Anatolijs V. Gorbunovs

Infrastructural Indicators
Rail network: 2,400 km all 1.000 m guage, excludes industrial lines
Road network: 59,500 km of which 33,000 km is hard surface
Ports: Riga, Ventspils, Liepaja, Daugavpils
Airport: Riga

Social Indicators, 1989
Health
Doctors: 50 per 10,000 persons
Hospital beds: 147 beds per 10,000 persons
Standard of Living
Housing: 19.8 m² per person
Food consumption: 3,390 calories daily per person of which 35 percent is grain products and potatoes
Consumption expenditures: 2,248 rubles per person
Savings: 1,782 rubles per person

This system was in force in 1991 when the Latvian Republic became independent and ceased to be under the operational command of ZAPRYBA. At this time, the Latvian fishing fleet appeared to be poorly maintained and included many obsolete vessels. The new Latvian Government, therefore, commissioned the Nordic Investment Bank (NIB) to review its industries, including the fisheries sector.

The NIB's[4] report pointed out that the fishing fleet was in poor condition when compared to the average standards of Western fishing nations. The Bank estimated that nearly one half of the fishing vessels deployed in the Baltic Sea and on the high-seas was obolete.

The processing fleet was in even worse condition; only about a third of the vessels was considered worthwhile to upgrade and modernize. The NIB, however, also estimated that some upgrading could be done with relatively modest investments which were estimated as follows:

The Baltic Fleet: The Baltic Fleet could be modernized at about $40,000 per vessel, and the catch level of this restructured fleet maintained with about half of the current number of vessels. The NIB estimated that the total investment needed was $6 million.

The High-seas Fleet: The modernization of the high-seas fleet would require an estimated $15 million, mostly for modern fish-finding and navigational equipment.

The Distant-water Support Fleet: The upgrading of the distant-water processing fleet and support vessels, however, would be more costly, and was estimated at $100 million.

To improve the situation, the Latvian Government arranged for several Western groups to discuss vessel modernization projects with local managers. Despite several attempts at joint ventures and various feasibility studies, no actual investment projects have been carried out as far as is known.

The NIB report listed the 1991 composition of the fleet as: Trawler fleet-91 vessels, Fish-processing Fleet-31 vessels, Transport Fleet-21 vessels, Baltic Fleet-208 vessels, Total fleet= 351 vessels.

B. 1992

Most of the distant-water fishing fleet was idled in Baltic ports during 1992 because of a lack of fuel and because the traditional grounds of the Latvian fishing fleet were no longer accessible. The fleet's operations were especially hard hit after the newly-independent Namibia declared a moratorium on foreign fishing in its 200-mile zone. African waters were in fact the most important fishing area for the Latvian distant-water fleet. The closure of the West Saharan fishing grounds (following Morocco's annexation of that territory) was especially painful as up to one-half of the Latvian high-seas fleet fished there. The initial shock, however, was dissipated somewhat towards the end of 1992 when the activities of the newly-organized Ministry of Maritime Affairs, and the increased diplomatic efforts of the new Latvian Government, secured renewed access to several traditional Atlantic grounds.

C. 1993

At the beginning of 1993, the Latvian fishing fleet numbered 277 vessels. Of this

total, 79 were high-seas vessels, while 198 coastal vessels fished only in the adjacent Baltic Sea, according to the Latvian Ministry of Maritime Affairs.[5] In late July 1993, however, the U.S. Navy listed only 223 vessels, with a total gross registered tonnage (GRT) of over 510,000 tons, as being in the Latvian fishing fleet registry (table 1).

Table 1. Latvia. Fishing fleet, by selected vessel capacity, 1993.

Capacity	Number	GRT	Average GRT
Under 500 GRT	71	9,884	139
Above 500 GRT	152	501,935	3,302
Total	223	511,819	2,295

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993.

The 152 vessels above 500 GRT listed in table 1 are not all fishing vessels; 7 of them are specialized fishery vessels and 21 are large fishery support vessels. It is also likely that some over 500-GRT-vessels are operating in the Baltic Sea. (For vessel names, class, GRT, country and year of construction, see appendices 1 and 2.)

III. HIGH-SEAS FLEET DISPERSAL

By June 1993, the Latvians had deployed 31 of their high-seas fishing vessels, mostly in the Atlantic. These trawlers are based in the Latvian ports of Riga and Liepaja. They are owned by the Riga Trawler and Refrigeration Fleet under the Director General Olgerts MAURINS, and by the Liepaja High-seas Fishing Fleet under the Director General, Dainis ENGELIS. Both companies are owned by the Latvian Government as no takers were found for the companies, or their vessels, under the current privatization drive.

Photo 2.--Latvian fishermen operate 8 large autonomous stern factory trawlers.

The high-seas fleet of Latvia was deployed in the summer of 1993 in the following fishing grounds and off the enumerated countries:

Northwest Atlantic: The largest Latvian fleet (13 vessels) was fishing for ocean perch in the international waters of the Northwest Atlantic, beyond the Canadian 200-mile EEZ. The fishing in this area is governed by the Northwest Atlantic Fisheries Organization (NAFO), which allocates the catch quotas to various countries. During NAFO's September 1992 Fourteenth Annual Meeting in Dartmouth (Canada), the quotas of the former Soviet Union (FSU) were allocated as a block quota to Estonia, Latvia, Lithuania, and Russia as the four countries were unable to agree among themselves as to the percentage of distribution. The block quota scheme was to be fished as an "olympic" fishery under the NAFO rules for fishing "others" quotas. Russia objected to this scheme and later filed

its own unilateral quotas equal to 95 percent of the FSU quotas in NAFO. Russia, as the successor state to the Soviet Union, received an allocation of 37,300 metric tons (t) of various species, mostly redfish (27,000 tons). In private negotiations, following the conclusion of the Annual Meeting, Russia transferred 12,000 t of its 1993 ocean perch (redfish) quota to Latvia, Estonia, and Lithuania, with each country receiving 4,000 tons. A mediation effort, led by Canada and the Faroe Islands, was conducted in an attempt to resolve the FSU quota dispute in NAFO before the 1993 Annual Metting, but it was unsuccessful. At the 1993 NAFO Meeting, due to lack of resolution of this problem by the four contracting parties, the same block quota system was adopted for Estonia, Latvia, Lithuania, and Russia for 1994, with quotas totaling approximately 31,000 tons. Its division among the Baltic countries has not been negotiated as of this writing.

Mauritania: The second largest Latvian fleet (9 vessels) is fishing for sardinella in the 200-mile zone of Mauritania. The Riga Trawler and Refrigeration Fleet and a Mauritanian company have concluded a commercial joint venture under which Latvian stern factory trawlers (ATLANTIK class) deliver their catch to Mauritanian ports for processing by local plants. The Latvian crews are replaced every 6 months by plane; they receive a fixed salary and a percentage of the value of the catch sold. The Latvians are now trying to effect crew replacements by ship rather than by plane to reduce expenses. Most of these exchanges will be carried out through ports in the Canary Islands.

The Latvian state companies have deployed, or would like to deploy, their trawlers off several other countries. Among these are the following:

Canada: Latvia occasionally deploys a few fishing vessels in Canadian waters. The Latvian and Canadian Governments concluded a Memorandum of Understanding authorizing commercial arrangements in the Canadian EEZ. However, the Canadians reportedly demanded $350 per day per vessel for observer fees and $50-60 per ton of silver hake as poundage fees. This would have consumed 34 percent of the total value of the catch. The Canadians also demanded that 10 percent of the Latvian catch of silver hake be delivered to Canadian shore-processing plants. The Latvians concluded that under such conditions it would not be profitable to fish in the Canadian EEZ.

Faroe Islands: Six Latvian stern trawlers have been fishing a catch quota of 12,000 t of blue whiting allocated by Denmark. The catch is headed and gutted and then exported, mostly to the countries of the former Soviet Union. The 1993 catch was reportedly good, and the quota was almost fished out by June 1993. When that happens, the Latvian fleet is supposed to move to nearby international waters and continue fishing for blue whiting.

Photo 3.--Latvia has 5 Tavriya-class refrigerated transports (3,500-GRT) built in Russia in the 1960s.

Nigeria: Two Latvian trawlers, belonging to a cooperative (former kolkhoz) fleet, are fishing in a joint venture with a Nigerian company. Details are not available.

Russia: The Riga Trawler and Refrigeration Fleet deployed 2 ATLANTIK-III class vessels in the Russian EEZ off Kamchatka in 1993. The Latvians concluded a joint venture agreement with a Kamchatka company and are leasing their vessels to that company which reportedly pays for the catch delivered.

The Latvian fishermen operated in the Russian Pacific 200-mile zone previously, while the country was still part of the Soviet Union. Full details on this fishery are lacking but, in July 1991, the Latvian Ministry of Fisheries reported that 6 Latvian stern factory trawlers had been idling in the Pacific for more than 2 weeks because of a diesel fuel shortage.[6] No information is available on this fishery in 1992, but it appears that most of the fleet returned to Latvia except for the two vessels that had a joint venture with a Russian company.

The Latvian companies are currently experiencing financial difficulties that have resulted in several vessels being seized in two countries.

Argentina/Uruguay: Six Latvian stern factory trawlers are being held in the ports of Buenos Aires and Montevideo (3 trawlers in each) for nonpayment of various expenses incurred while fishing off Chile, Argentina, and Peru (with 2 vessels in each country) in 1990-91. The Latvian crews were finally flown back to Riga in April 1993; the trawlers will probably be sold at a public auction to the highest bidder. Their price will most likely be low because of their age. The names of these 6 trawlers are not available.

United States: Two Latvian trawlers (*Durbe* and *Muravjova*), belonging to the Liepaja High-seas Fishing Fleet, are being held by the Trinity Shipyard in Beaumont, Texas. Trinity accepted the vessels in 1992 for modernization through a Seattle law firm, but was unable to obtain payments for the work completed. The case is in court.

The remaining Latvian high-seas vessels, representing almost one-half of the distant-water fleet, are idle in Latvian ports, either for lack of diesel fuel or because the catch allocations by foreign countries are insufficient to support their operations. The upkeep of the idled high-seas vessels is an expensive proposition and the Latvian Government would like to dispose of them as soon as possible, either by selling them off, or by scrapping them. Most of these vessels are aged, and even if catch allocations in foreign fishing zones became available, it is not likely that these vessels would be able to operate profitably. Most Soviet vessels were not built with diesel fuel efficiency as a high priority because diesel oil was dirt cheap (when compared to Western prices). Diesel fuel prices have increased several times since the breakup of the Soviet Union. Since Latvia currently receives its fuel from Russia, which is increasing its price for diesel fuel to the world market level, the Latvians expect fuel costs to continue rising.

The Latvian Government faces other problems associated with the fisheries sector. The fishing companies continue to pay minimum wages to the fishing crews and officers of the idled high-seas vessels. This represents a heavy burden on the already cash-strapped companies which are actively trying to dispose of the non-operational vessels.

IV. FISHERY SUPPORT FLEET

The Latvian fishery support fleet is mostly operated by the Riga Trawler and Refrigeration Fleet company. In 1991, it consisted of 9 baseships and processing vessels, 3 fishery refrigerated transports, and 2 exploratory research vessels for a total of 14 vessels (appendix 3).[7] The Latvian Government has been reducing this fleet and, by 1993, it had only 10 vessels.

Some high-seas fishery support vessels are most likely also based at Liepaja. The exact number is not known, but various sources estimate it at 4 large (over 4,000 GRT) vessels. They are probably 1 mothership and 3 refrigerated transports. Their names are not available.

The Lloyds' of London lists in its latest December 1992 statistics only 9 fishery support vessels, with a total gross tonnage of 41,100 GRT as being in the Latvian registry. These statistics probably show the reduction of 3 fishery support vessels discussed in the footnotes of appendix 3 and listed in appendix five. Their total tonnage of 34,680 GRT added to the 41,100 GRT comes close to the gross tonnage reported by the U.S. Office of Naval Intelligence (76,900 GRT).[8]

V. FLEET REDUCTION

According to the U.S. Navy, during the past two years Latvia reduced the size of its fishing fleet by 6 vessels and a total of 15,330 gross tons (appendix 5). Of this total, 4 vessels were reflagged to other countries: a small fishing vessel (*Darya Zar*) was sold to Iran; a SIBIR-class processing vessel (*Plutonas*) is now operated by the Lithuanian fishing fleet; the fisheries training vessel, *Sedov*, and a medium trawler were turned over to the Russian Federation[9]. In addition, two large stern factory trawlers of the MAYAKOVSKII class were decommissioned, but it is not known whether they were scrapped for iron or sold abroad. It is likely, in light of the decrease in the number of vessels between 1991 and 1993, reported by various sources, that additional Latvian vessels have been decommissioned. Full information on this process, however, is not available.

VI. FISHING GROUNDS

The Latvian fleet is widely dispersed, primarily on Atlantic grounds. The country's high-seas fishing fleets now operate only in the northern and southern Atlantic; the distant-water fisheries in Antarctica and in the southeastern Pacific have been abandoned because the increasing cost of fuel and the length of the trips made fishing there unprofitable. A small fishery, however, is maintained in the Northwest Pacific and is based in Kamchatka ports.

The distant waters of the North and South Atlantic are fished by large stern factory trawlers, supported by processing vessels and refrigerated transports.

Northwest Atlantic: This fishery, regulated by NAFO, has been reduced during the past few years with the Americanization and Canadianization of the fishing grounds by both countries. Latvian fishermen can operate now only in international waters beyond the 200-mile Canadian EEZ where they catch Atlantic ocean perch under a NAFO quota.

Northeast Atlantic: Regulated by the International Commission for the Northeast Atlantic Fisheries (ICNEAF), these grounds became a prime fishery for the Latvian fleet until the European Community (EC) extended its jurisdiction to 200 miles in 1977, excluding all of the former Soviet vessels from its EEZ. No Soviet fishing was allowed in the EC zone for the past 16 years. After Latvia became independent, however, neighboring Denmark extended not only considerable aid to Latvian fishermen, but also allowed them in 1993 to fish off the Faroe Islands for blue whiting. The catch is processed and exported to the countries of the former Soviet Union. The Latvians also fish in the international waters of the northeastern Atlantic.

Central East Atlantic: The fishery off the West African coast was, in recent decades, the most important Latvian fishing ground. Operations centered on the waters off the disputed Western Sahara, off Mauritania (under a bilateral agreement with the former Soviet Union which also benefitted Latvia), and off Namibia (the former UN Trust Territory of Southwest Africa). Namibia's independence and Morocco's annexation of Western Sahara spelled the end of these operations.

Southwestern Atlantic: The Latvians fish for squid beyond the conservation zone (150 miles) of the Falkland Islands, which is administered by the United Kingdom. The catch is sold on the grounds to Japanese refrigerated transports at $1,200-1,400 per metric ton for frozen, cleaned squid tubes.

Northwest Pacific: Latvian fishermen catch Alaska pollock in Russian waters for delivery to Kamchatka processing plants. Only two large stern factory trawlers, on lease to a Kamchatka joint venture company, are currently deployed in this fishery.

VII. CATCH AND PRODUCTION

Latvian fishermen traditionally contributed about 5 percent of the former Soviet Union's fishery landings, or from 500,000-550,000 metric tons (t). The peak was reached in 1987 when Latvian fleets brought in 571,000 t of fish and shellfish (appendix 6).

In 1991, Latvian fishery landings amounted to 366,000 tons. Of this total, 310,000 t was harvested on the high-seas and in the economic zones of various other countries, while 56,000 t was caught in the Baltic Sea. Data for 1992 are not available, but the catch is estimated to have been about 150,000 tons. The estimated fishery landings for 1993 are approximately 200,000 tons.

In 1991, a total of 211,000 t of processed seafood, 203 million standard cans and 24,000 t of fishmeal was produced. Latvian fish hatcheries release annually over 7 million fish fingerlings, including 700,000 Atlantic salmon and trout smolts; these are released in the Baltic Sea.

The Latvian Republic has 5 fish-processing plants, 8 fish farms, and a fisheries ship-repair yard as well as a plant that manufactures fish-processing equipment.

VIII. FISHING COMPANIES

The Latvian fishing companies are divided into private and state-owned firms. The private sector consists mainly of 11 fishing cooperatives; these are multipurpose

companies, independently conducting their economic activities. They own about 18 high-seas fishing vessels which operate in the Atlantic Ocean; the cooperatives also own the entire Latvian fleet fishing in the Baltic Sea. In addition, the cooperatives own fish-processing plants, harbors, a fishery support fleet, warehouses, and freezing plants. Some also engage in ship repair, the building of recreational boats, net making, fish farming, growing fur animals, and floriculture.

In 1992, they were transformed into share-holding and joint-stock companies, and each member obtained a part of the common property. In the future, the members' income will depend on the number of shares in the stock-holding company. The share-holding company LOMS, which manufactures nets and ropes, is another company belonging to the private sector; employees own all of its shares. The number of private companies and fishermen who catch small quantities of fish in the Baltic with their own vessels is growing. Several joint ventures with French, Danish, Belgian and U.S. companies have also been registered in Latvia.

The state-owned fleet in Latvia is managed by two large organizations whose vessels fish primarily in the Atlantic Ocean. Their fleet is composed of an estimated 66 high-seas fishing vessels 55 to 120 meters long with engines having 1,300 to 7,000 horsepower (appendices 3 and 4). They can carry out their operations in any part of the world's oceans and catch any species of fish. This fleet processes and delivers frozen, filleted and canned fish, as well as fish meal and fish oil. Fishery products are shipped from the fishing grounds by cargo carriers and refrigerated transports of the Latvian transport fleet.

IX. BILATERALS & JOINT VENTURES

Following the unsuccessful coup d'etat in Moscow in August 1991, Latvia gained its independence and thus entered the world's fishery management systems. The Parliament decided that Latvia should join the relevant international fishery conventions after the country's independence was recognized by the Soviet Union on 6 September 1991. The Republic has become a contracting party to the Baltic Sea Fisheries Commission, International Commission for the Exploration of the Seas (ICES), North Atlantic Fisheries Organization (NAFO) and other international fishery bodies. Latvia also signed bilateral fishery agreements with Russia, Denmark and the Faroe Islands, Sweden, Finland, Canada, the European Community, and the United States of America. The possibility of signing similar agreements with additional countries is being discussed.

Faroe Islands: The bilateral fisheries agreement with the Faroe Islands (with the consent of Denmark) provides Latvian fishermen with a 1993 catch quota of 12,000 t of blue whiting in the Faroese EEZ. In exchange, the Faroese fishermen will receive a 1993 catch quota of 4,600 t of various species in the Latvian EEZ in the Baltic.[10]

Sweden: At the end of January 1992, a quadripartite agreement was signed between Sweden and the fishery administrators of Estonia, Latvia, and Lithuania in Stockholm. The document defines the contested fishing grounds in the coastal areas of the Baltic Sea. An estimated 75 percent of fishery stocks in the area will be managed by the Baltic states.[11]

Latvia is open to cooperation and joint ventures with foreign partners. It can offer for sale a wide range of fish and fishery products. Good possibilities exist for repairing fishing vessels in Latvian shipyards at low cost; high-quality servicing and maintenance of foreign vessels in Latvian ports is another possibility. Latvia is inviting foreign private companies interested in fisheries cooperation to establish contacts and joint ventures, and to make capital investments.

The main areas of potential common interest are as follows: joint fishing in foreign exclusive economic zones, marketing of fish and fishery products in industrially developed countries, fishing fleet modernization, modernization of fish-processing plants, joint construction of low-tonnage fishing vessels, manufacturing of fishing nets, and development of salmon and trout farming, as well as the culture of other fish species.

X. OUTLOOK

Latvian fisheries are an important sector in the Latvian economy. The industry is endowed with satisfactory ports and adjacent processing facilities which were expanded rapidly from the 1950s to the 1970s. The delivery of fishing vessels from Soviet, Polish, and East German shipyards was instrumental in the expansion of Latvian fisheries throughout the world. This fleet, however, was part of Soviet fishery expeditions which were supported by a centralized structure in Moscow. The inexpensive fuel, transportation from fishing grounds back to domestic markets, and regular air exchanges of the crews, made such far-flung operations possible, if not profitable. (Under the Soviet system, any deficits were absorbed by the State.) Following Latvia's independence from the USSR in September 1991, however, the situation began to change. Latvia was now a foreign country and Soviet, later Russian, oil was sold to it at world prices, if it was available at all. The large USSR-wide marketing system disappeared. Ukraine and the Russian Federation now import Latvian fishery products as they would from any other foreign country. The worst problem is probably the loss of access to fishing grounds which were previously available under bilateral fishery agreements with many coastal countries in Latin America, Asia, and Africa. Another problem is the lack of diesel fuel. The resulting inability to sail for distant-water fishing grounds has forced almost half of the high-seas fleet to remain idle in Latvian ports.

SOURCES

FAO. Fishery Country Profile. *Latvia*. Rome, April 1992.

Latvian Ministry of Maritime Affairs. "Latvian Fisheries." Riga, December 1992.

Latvian Ministry of Maritime Affairs, Personal Communications, 1993.

Lloyd's Registry of Shipping. *Fleet Statistics as of 31 December 1992*. London, 1993.

National Technical Information Service. *Latvia: An Economic Profile*. Washington, D.C., August 1992.

Nordic Investment Bank. Baltic study. September 1991.

U.S. Navy, Office of Naval Intelligence.

ENDNOTES

1. This figure probably included the families of the fishermen since, in December 1992, the Latvian Ministry of Maritime Affairs estimated the 1989 employment in the fisheries sector at 30,000 persons. By 1993, this number had decreased to 25,200 persons. (See appendix 6 for details.)

2. FAO. Fishery Country Profile. *Latvia*. Rome, 1992.

3. Nordic Investment Bank, Baltic study, September 1991.

4. The main source for the 1991 section is the Nordic Investment Bank (NIB) study.

5. The figure of 79 high-seas fishing vessels, obtained from an unpublished report of the Latvian Ministry of Maritime Affairs, may not be the total number of such vessels. FAO gives the total number of Latvian high-seas vessels as 89 trawlers in 1991. For the same year, the Nordic Investment Bank (NIB) counted 91 units in the high-seas trawler fleet.

6. Radio Riga, 12 July 1991.

7. Latvian Ministry of Maritime Affairs, Personal Communication, December 1992.

8. The total number of fishery support vessels in the Latvian fleet is uncertain. This is, in part, because various sources mention them under different classifications. The NIB lists 31 fish-processing vessels and 21 refrigerated transports. FAO, on the other hand, lists 20 "cargo vessels" and 30 fish-processing units. An updated FAO profile of Latvian fisheries (using new statistics supplied by the Latvian Sea Fisheries Research Institute) lists 16 fishery cargo and 23 fish-processing vessels. In July 1993, the U.S. Navy listed 14 refrigerated fish transports and 2 general cargo fish transports which corresponds with the figure given by the Latvian Sea Fisheries Research Institute for "fishery cargo" vessels. The 9 vessels listed by Lloyd's as of December 31, 1992, reflect additional reductions of these vessels. A complete and reliable picture, however, can only be obtained from the Latvian Ministry of Transportation. Unfortunately, requests for clarification were unanswered.

9. The *Sedov* (3,709 GRT) was built in 1921 in Germany. It was seized by the Soviet Armed Forces in 1945, and converted into a training ship for fisheries and merchant marine cadets.

10. Faroese Statistical Bulletin, May 1993.

11. Radio Russia, 27 January 1993.

APPENDIX SECTION

Appendix 1 Latvia Fishing and fishery support fleet, by vessel name, class, gross tonnage, and country and year of construction; 1993.

Vessel name	Class	GRT	Country built	Year
Abava	BALTIKA	108	USSR	1976
Abruka	ORLENOK	1,513	GDR	1986
Afanasijs Nikitins	MAYAKOVSKIY	2,433	USSR	1964
Aiga		107	USSR	1961
Aizkraukle	RYBATSKAYA SLAVA	16,532	Germany	1966
Alants	OKEAN	508	GDR	1959
Aleksey Pozdnyakov	PIONERSK	14,340	Poland	1967
Alfa	BALTIKA	108	USSR	1983
Altairs	PULKOVSKIY MERIDIAN	4,407	USSR	1984
Amula		104	USSR	1984
Arats		359	USSR	1991
Aries		117	USSR	1990
Arinas	SHUSHVE	179	Bulgaria	1971
Arona	BALTIKA	117	USSR	1986
Aspazija	TAVRIYA	3,556	USSR	1965
Atmoda	KARL LIBKNEKHT	11,755	GDR	1989
Auda	ALPINIST	720	USSR	1989
Augusts Berzins	ORLENOK	1,513	GDR	1986
Auri	BALTIKA	117	Russia	1991
Aynazhi	BALTIKA	108	USSR	1975
Balakhna	PULKOVSKIY MERIDIAN	3,272	USSR	1981
Baltezers	BALTIKA	108	USSR	1987
Baltijas Cels	KARL LIBKNEKHT	12,403	GDR	1988
Baltijas Petnieks	ZHELEZNYAKOV	775	USSR	1984
Baltika	BALTIKA	108	USSR	1972
Barta I	ALPINIST	720	USSR	1987
Bartava		117	USSR	1986
Bazalt	ATLANTIK	2,177	GDR	1970
Bella	BALTIKA	108	USSR	1988
Beringa Sala	OSTROV RUSSKIY	9,795	Sweden	1970
Beta	BALTIKA	108	USSR	1984
Betelgeize	LUCHEGORSK	2,581	USSR	1970
Biksti		117	USSR	1985
Blome	BALTIKA	108	USSR	1984
Bonivars		117	USSR	1985
Bravo	BALTIKA	108	USSR	1984
Breksis	OKEAN	508	GDR	1959
Briedis		117	USSR	1987
Briviba	BALTIKA	108	USSR	1974
Broceni		117	USSR	1985
Bukaisi		117	USSR	1988
Burtnieki		117	USSR	1989
Busnieki		117	USSR	1987
Bute	OKEAN	508	GDR	1959
Cecerska	PROMETEY MOD A	3,977	GDR	1981
Daugava		117	USSR	1990
Daugavgriva	PULKOVSKIY MERIDIAN	4,407	USSR	1990
Diana	PROMETEY	3,977	GDR	1977
Dimants	KARL LIBKNEKHT	11,755	GDR	1974
Djuni	SHUSHVE	179	Bulgaria	1971
Doles Sala	OSTROV RUSSKIY	9,752	Sweden	1969
Druzhba	DRUZHBA	669	GDR	1953
Durbe I	ALPINIST	720	USSR	1988
Dzintarjura	MAYAKOVSKIY	3,170	USSR	1967
Dzintarkrasts	LUCHEGORSK	2,581	USSR	1972
Dzintarzeme	LUCHEGORSK	2,581	USSR	1973
Dzulija	MAYAKOVSKIY	2,407	USSR	1967
Eglaine	PULKOVSKIY MERIDIAN	4,407	USSR	1989
Fjodors Jerozidi	PROMETEY MOD A	3,146	GDR	1982
Garciems	PROMETEY MOD A	3,977	GDR	1978
Garupe	PROMETEY	3,933	GDR	1974
Gaysma	BALTIKA	108	USSR	1984
Globuss	BALTIKA	108	USSR	1975
Granits	PROMETEY	3,931	GDR	1975
Grif	BALTIKA	108	USSR	1983
Grot	BALTIKA	108	USSR	1974
Gunars Akis	LUCHEGORSK	2,322	USSR	1972
Hoglande	BALTIKA	117	USSR	1983
Ilukste	PROMETEY	3,017	GDR	1974
Imanta	OKEAN	508	GDR	1960
Inciems	BOLOGOYE	334	USSR	1961
Indra		104	USSR	1990
Inzenieris Judincevs	PROMETEY MOD A	3,977	GDR	1981
Irlava	KIROVETS	190	USSR	1989
Islica	BOLOGOYE	334	USSR	1961

Appendix 1. Latvia. Continued.

Vessel name	Class	GRT	Country built	Year
Janis Rainbergs	PROMETEY	3,980	GDR	1974
Jukums Vacietis	PROMETEY	3,977	GDR	1975
Jurnieks	ATLANTIK	2,657	GDR	1972
Kalngale	PROMETEY	3,977	GDR	1976
Kalvene		117	USSR	1990
Kapteinis Jedemskis	PULKOVSKIY MERIDIAN	4,407	USSR	1986
Kapteinis Kulinics	KARL LIBKNEKHT	11,755	GDR	1981
Karlis Bude	MAYAKOVSKIY	2,352	USSR	1968
Karpa	OKEAN	507	GDR	1959
Kauguri	PROMETEY MOD A	3,977	GDR	1982
Kaupo	OKEAN	502	GDR	1959
Kipsala	OSTROV RUSSKIY	9,795	Sweden	1970
Kira	MAYAKOVSKIY	2,406	USSR	1966
Kolka	ALPINIST	720	USSR	1980
Komsomol Latvii	MAYAKOVSKIY	3,170	USSR	1969
Kondors	ATLANTIK	2,531	GDR	1972
Korunds	ATLANTIK	2,177	GDR	1971
Kursa	ORLENOK	1,895	GDR	1986
Kvarcs	LUCHEGORSK	3,014	USSR	1974
Laguna	MAYAKOVSKIY	3,170	USSR	1965
Laimdota		104	USSR	1991
Latgale	OKEAN	507	GDR	1960
Ledus	TAVRIYA	3,556	USSR	1967
Ligatne	MAYAKOVSKIY	2,433	USSR	1965
Ligita	ALPINIST	738	USSR	1987
Limbazhi	BALTIKA	108	USSR	1974
Linis	OKEAN	508	GDR	1959
Luga	MAYAKOVSKIY	3,170	USSR	1969
Lunohods I	LUCHEGORSK	2,581	USSR	1971
Mangali	RADUZHNYY	633	USSR	1974
Mars 2	LUCHEGORSK	3,162	USSR	1973
Miers	OKEAN	508	GDR	1960
Mikelbaka	PULKOVSKIY MERIDIAN	4,407	USSR	1990
Milgravis	ORLENOK	1,513	GDR	1986
Misa	PROMETEY MOD A	3,977	GDR	1982
Mramor	MAYAKOVSKIY	3,170	USSR	1968
MRTK 1008	BALTIKA	108	USSR	1974
MRTK 1020	BALTIKA	108	USSR	1975
MRTK 1025	BALTIKA	108	USSR	1976
MRTK 1063	BALTIKA	108	USSR	1981
MRTK 1098	BALTIKA	108	USSR	1985
Muravjova	ALPINIST	738	USSR	1986
Negis	OKEAN	508	GDR	1959
Nelson Stepanyan	MAYAKOVSKIY	3,170	USSR	1968
Nemuna	YANA	3,550	Germany	1957
Nika	KHOBI	795	USSR	1961
Nikolayevskiy Komsomolets	LUCHEGORSK	2,581	USSR	1971
Nitsa	ALPINIST	720	USSR	1977
Ochamuri	ORLENOK	1,513	GDR	1985
Odincova	ORLENOK	1,513	GDR	1984
Olaine	ORLENOK	1,898	GDR	1983
Orciks	ORLENOK	1,513	GDR	1983
Orlecs	ATLANTIK	2,154	GDR	1972
Orska	ORLENOK	1,513	GDR	1984
Otrog	MAYAKOVSKIY	3,170	USSR	1965
Ozeri	ORLENOK	1,513	GDR	1984
Pabazi	PROMETEY	3,977	GDR	1976
Pardaugava	PIONERSK	13,604	Poland	1967
Pavilosta	ALPINIST	720	USSR	1988
Pegas	ZHELEZNYAKOV	775	USSR	1986
Perse	BALTIKA	108	USSR	1976
Peteris Plesums	ALPINIST	738	USSR	1988
Plamja	KARELIYA	206	USSR	1976
Plavnieki	PROFESSOR BARANOV	13,571	Poland	1968
Plienciems		117	USSR	1988
Priekule	KONTUR	264	GDR	1958
Pruzani	SPRUT	4,769	Poland	1980
Radonits	ATLANTIK	2,154	GDR	1975
Rauda	OKEAN	507	GDR	1959
Rauna	BALTIKA	108	USSR	1976
Reguls	PULKOVSKIY MERIDIAN	3,272	USSR	1983
Roberts Eidemanis	MAYAKOVSKIY	3,162	USSR	1968
Rohuneeme		100	USSR	1966
Ronu Sala	OSTROV RUSSKIY	9,795	Sweden	1971
Rotans	MAYAK	638	USSR	1970
Rozula	PROMETEY	3,977	GDR	1974
Rumbula	ALTAY	3,468	Finland	1973

Appendix 1. Latvia. Continued

Vessel name	Class	GRT	Country built	Year
Rutsava	ALPINIST	720	USSR	1977
Rybnadzor 4		169	USSR	1979
Rykanda	BALTIKA	108	USSR	1976
Salaca	MAYAK	699	USSR	1968
Salatsa	SELGA	100	USSR	1975
Salatsgriva	ZHELEZNYAKOV	723	USSR	1989
Salna	TAVRIYA	3,556	USSR	1964
Santa	ZHELEZNYAKOV	723	USSR	1988
Sarma	TAVRIYA	3,556	USSR	1964
Saule	OKEAN	507	GDR	1960
Selderi	50 LET SSSR	13,083	USSR	1984
Selga	SELGA	100	USSR	1973
Selga	ZHELEZNYAKOV	775	USSR	1990
Sencis		117	USSR	1989
Senite	RADUZHNYY	633	USSR	1990
Sergejs Jesenins	PULKOVSKIY MERIDIAN	4,407	USSR	1987
Sigulda	ANDIZHAN	3,251	GDR	1962
Siriuss	ATLANTIK	2,097	GDR	1975
Skriveri	50 LET SSSR	10,108	USSR	1980
Skulte	ALPINIST	720	USSR	1989
Slava	RYBATSKAYA SLAVA	16,389	Germany	1965
Sovetskaya Latviya	TAVRIYA	3,307	USSR	1961
Sovetskaya Rodina	TAVRIYA	3,230	USSR	1961
Spidola	OKEAN	507	GDR	1960
Staritsa	DRUZHBA	695	GDR	1955
Stende	PULKOVSKIY MERIDIAN	4,407	USSR	1989
Store	OKEAN	508	GDR	1959
Straume	50 LET SSSR	13,083	USSR	1974
Sventa	RR 151	258	GDR	1955
Svetupe	BALTIKA	108	USSR	1974
Tantals	KRONSHTADT	3,000	USSR	1977
Tauisk	DRUZHBA	669	GDR	1954
Tayminsh	OKEAN	502	GDR	1959
Teviya	OKEAN	508	GDR	1960
Tobago	ZHELEZNYAKOV	775	USSR	1990
Tseriba	OKEAN	508	GDR	1960
Ugale	SELGA	100	USSR	1976
Uldis	SELGA	100	USSR	1974
Ural	BALTIKA	108	USSR	1984
Urga	BALTIKA	108	USSR	1986
Usma	ZHELEZNYAKOV	775	USSR	1989
Uzvara	KONTUR	264	GDR	1957
Vaidava	KARELIYA	180	USSR	1973
Valka	LUCHEGORSK	2,581	USSR	1972
Vecmilgravis	PULKOVSKIY MERIDIAN	4,407	USSR	1988
Vega	LAUKUVA	359	USSR	1990
Vetrasputns	TAVRIYA	3,308	USSR	1962
Viesturs	OKEAN	508	GDR	1960
Vita	KONTUR	264	GDR	1957
Vjaza	MAYAKOVSKIY	2,406	USSR	1966
Vytrupe	BALTIKA	108	USSR	1974
Yaunupe	BALTIKA	108	USSR	1975
Yurmala	DRUZHBA	695	GDR	1955
Zane	BALTIKA	108	USSR	1978
Zemgale	OKEAN	508	GDR	1960
Zemgale	BALTIKA	108	USSR	1975
Zheleznyakov	ZHELEZNYAKOV	633	USSR	1967
Zhupanova	DRUZHBA	692	GDR	1955
Ziedonis	OKEAN	507	GDR	1959
Zitars	BALTIKA	108	USSR	1984
Zurbagans	MAYAK	680	USSR	1968
Zvejnieks	ALPINIST	720	USSR	1988

TOTAL = 214 vessels TOTAL GROSS TONNAGE = 476,802 GRT

Source U.S. Navy, Office of Naval Intelligence, 29 July 1993.

GRT - Gross registered tonnage

Note: This list does not include the specialized vessels (fishery training, fishery research vessels, and tankers) listed in appendix 2.

Appendix 2. Latvia. Specialized vessels of the Latvian fishing fleet, by type and name of vessel, class, gross registered tonnage, country and year of construction: 1993.

Vessel type/name	Class	GRT	Built in	Year built
TRAINING VESSELS				
Eholots	SKRYPLEV	3,708	Denmark	1969
Aicinajums	PROMETEI MODEL A	3,977	GDR	1979
Nikoljas Zicars	YANTARNII	6,455	Russia	1968
Diplote	ATLANTIK	2,211	GDR	1973
Kursografs	ATLANTIK	2,211	GDR	1973
RESEARCH VESSELS*				
Bespokoinii	KARELIA	206	Russia	1966
Baltijas Zvaigzne	ZHELEZNYAKOV	738	Russia	1976
TANKERS				
Liepaya	YEGORYEVSK	7,949	Russia	1960
Yelsk	YEGORYEVSK	7,562	Russia	1960

Source. U.S. Navy, Office of Naval Intelligence, 27 July 1993.

* These 2 vessels are probably operated by the biologists of the Latvian Sea Fisheries Research Institute, located in Riga, who study mostly Baltic Sea fishery stocks and conditions

Appendix 3. Latvia. Riga Trawler and Refrigeration Fleet, by type of vessel, class, number, and gross tonnage; 1993.

Type/class of vessels	Vessels	Gross tonnage	
		Per vessel	Total(E)
	Number	*GRT*	
TRAWLERS			
BATM-PULKOVSKY MERIDIAN class	6	3,250	19,500
RTMS-PROMETEI class	16	3,017	48,272
RTMS-ATLANTIK II class	2	2,652	5,304
RTMS-PELENGATOR class	1	3,775	3,775
BMRT-MAYAKOVSKII class	5	3,170	15,850
STM-ORLENOK (ATLANTIK III)	1	1,900	1,900
SUBTOTAL	31		94,601
MOTHERSHIPS AND PROCESSING VESSELS			
Motherships-RYBATSKAIA SLAVA class	2*	16,500	33,000
-PIONERSK class	2*	14,000	28,000
Processing- TAVRIYA class	5**	3,180	15,900
SUBTOTAL	9		76,900
REFRIGERATED TRANSPORTS			
YANA class (Nemuna)	1	3,550	3,550
YANTARNII class (Nikolajs Zicars)	1	6,455	6,455
MRT-RADUZHNII class	1	630	630
SUBTOTAL	3		10,535
EXPLORATORY-RESEARCH VESSELS			
SRTMK	2***	750(E)	1,500
GRAND TOTAL	45	N/A	183,536
DECOMMISSIONED VESSELS	4		

Sources. Latvian Ministry of Maritime Affairs, Personal Communication, December 1992, U.S Navy, Office of Naval Intelligence, 27 July 1993

* The 4 motherships had been reduced to 2 units by 1993.
** The 5 TAVRIYA-class vesselss had been reduced to 4 units by 1993.
*** One exploratory vessel had been scrapped or sold by 1993

BATM - Bolshoi avtonomnyi trauler morozilnyi (Large autonomous freezer trawler)
RTMS - Rybolovnyi trauler morozilnyi srednii (Medium freezer fishing trawler)
BMRT Bolshoi morozilnyi rybolovnyi trauler (Large freezer fishing trawler)
STM - Srednii trauler morozilnyi (Medium freezer trawler)
SRTMK - Srednii rybolovnyi trauler morozilnyi kormovoi (Medium freezer trawler)
E - Estimated

Appendix 4. Latvia. Trawlers of the Liepaja High-seas Fishing Fleet, by class and name of vessel, gross registered tonnage, and year of construction; 1993.

Vessel class/name	GRT	Year
PULKOVSKII MERIDIAN		
Altairs	4,407	1984
Mikelbaka	4,407	1990
ATLANTIK IV		
Korunds	2,177	1972
Kondors	2,531	1971
Sirıuss	2,097	1975
ORLENOK		
Odincova	1,513	1984
Orska	1,513	1984
ALPINIST		
Kolka	720	1980
Muravjova*	738	1986
Durbe*	720	1988
Barta I	720	1987
Pavilosta	720	1988
SPRUT		
Pruzani	4,769	1980
LUCHEGORSK		
Kvarcs	3,014	1974
Betelgeize	2,581	1970
Lunohods I	2,581	1971
Valka	2,581	1972
Mars-2	3,162	1973
MAYAKOVSKII		
Luga	3,170	1969
KRONSHTADT		
Tantals	3,000	1977
TOTAL GRT	47,121	
Class not known		
Spika	N/A	
TOTAL NUMBER OF VESSELS = 21		

Source: Latvian Ministry of Maritime Affairs, Personal Communication, June 1993.

* The 2 Alpinist-class trawlers are in a U S shipyard in Texas for modernization

Appendix 5. Latvia. Fishing fleet reduction, by disposition; 1993.

Vessel name	Class	GRT	Construction Country	Year	New owner
INACTIVE VESSELS					
Ardava	MAYAKOVSKII	2,406	USSR	1967	*
E. Veidenbaums	MAYAKOVSKII	2,433	USSR	1960	*
REFLAGGED VESSELS					
Darya Zar I		117	USSR	1986	Iran
Plutonas	SIBIR	5,942	USSR	1969	Lithuania
Sedov	SEDOV	3,709	GDR	1921	Russia
Virsaitis	ZHELEZNYAKOV	723	USSR	1990	Russia
TOTAL = 6 vessels		TOTAL GROSS TONNAGE = 15,330 GRT			

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993

* These vessels became inactive in March 1993

Note: Six stern factory trawlers (names are not known) are being held in Argentina and Uruguay. See Chapter III for details.

Appendix 6. Latvia. Fisheries catch, production, fleet, and employment; 1989-1993.

Year	Fisheries catch			Fisheries Production				High-seas vessels	Employment
	Baltic	High-seas	Total	Edible	Canned	Total	Industrial(2)		
	1,000 metric tons(t)			1,000t	cans(1)	1,000t	1,000t	number	persons
1987	N/A	N/A	571	N/A	N/A	N/A	N/A	N/A	N/A
1988	N/A	N/A	558	N/A	N/A	N/A	N/A	N/A	N/A
1989	60	483	543***	244	235	327	97	92	30,000
1990	58	409	467***	203	229	283	85	94	28,800
1991	56	309	365	166	215	237	57	96	29,200
1992*	N/A	N/A	125	83	72	109	20	87	25,000
1993**	55	150(3)	200(3)	111	96	145	27	79	25,200

Sources: Latvian Ministry of Maritime Affairs, Personal Communication, December 1992 and June 1993. *Latvia: An Economic Profile*. Washington, DC: August 1992 (1987 & 1988 catch figures only)

N/A - Not available
* January-September only
** Forecast
*** In the second source, the 1989 and 1990 catch figures are given as 547 and 470, respectively
(1) In million of standard cans (350 grams each)
(2) Mainly fish meal and fish oils
(3) Personal communication from the Latvian Deputy Minister of Maritime Affairs, June 1993

2.4

LITHUANIA

Lithuania is the largest of the three Baltic countries that became independent from the Soviet Union in 1991. The Lithuanian fishing industry was part of the centrally planned economy, directed by the Soviet Ministry of Fisheries in Moscow, and its fishing fleet was sustained by the Soviet network of fishery support vessels and representatives in foreign ports. Lithuania now has to secure access to fishing grounds in foreign 200-mile zones itself and can no longer rely on cheap, subsidized Soviet diesel oil and the domestic Soviet sales network which previously sustained them. The transition from a command to a free-market economy has been exacerbated by the new political situation and the need to reorganize the fishery administration. The Lithuanian fishing fleet has 209 vessels with a total of 449,000 gross registered tons (GRT); its capacity exceeds Lithuania's fishery resources.

CONTENTS

I. Background 67
II. Fishing Fleet 68
A. High-seas Fleet 68
B. Fleet Reduction 73
C. Jura State Fishing Company 73
III. Fishing Ports 74
IV. Fisheries Catch 75
V. Fishing Grounds 75
VI. Fisheries Administration 76
VII. Bilateral Agreements 76
VIII. Outlook 77
Sources 78
Endnotes 79
Appendices 81

I. BACKGROUND

Lithuania is the largest and the most populous of the three Baltic states. With a land area about the size of West Virginia (65,200 square kilometers), its window to the Baltic Sea is small - 40 kilometers.[1] Bordering in the north on Latvia, it shares the shallow Kursiu Marios (the Bay of Kursk) with the Russian Kaliningrad enclave in the south. The population of this southernmost Baltic state is 3.7 million inhabitants.

In 1990, the high-seas fishing fleet of 153 vessels landed 326,000 metric tons of fishery

products. The small Baltic fleet landed only 18,000 tons. About 9,000 tons were harvested from freshwater ponds. By the end of 1992, however, the total catch was halved to 170,000 tons.

The fisheries sector employed about 24,000 persons in 1991; of this total, 9,000 were employed in the fishing fleets, while 15,000 were working in the fish-processing industry. The percentage of fisheries contribution to the gross national product is not available, nor is there any reliable information on the amount and the type of fishery commodities exported.

II. FISHING FLEET

The Lithuanian fishing fleet consisted of 201 fishing and fishery support vessels as the Soviet Union was breaking up in 1991. Of this total, 153 vessels fished on the high-seas and 48 in the Baltic. Lithuania had the smallest fleet out of the three former Soviet Baltic republics, comprising only about 26 percent of the 762 vessels in the three Baltic fleets.[2]

A study done by the Nordic Investment Bank (NIB) in 1991, after the country declared its independence, found that the fishing fleet was in poor condition when compared to the average standards of Western fishing nations. The NIB estimated that nearly one half of the fishing vessels, deployed in the Baltic Sea and on the high-seas, was obsolete. The processing fleet was in even worse condition; only about a third of the vessels was considered worthwhile to upgrade and modernize. The NIB estimated that some upgrading could be done with relatively modest investments. However, the difficult economic situation currently facing the Lithuanian Government will likely mean that funding for the fleet is unavailable.

Of the 153 high-seas vessels, the state-owned company JURA[3], located in the port city of Klaipeda, took over the operation of 124 high-seas vessels after Lithuania became independent in late 1991.[4] Another state-owned company, the Klaipeda State Transportation Fleet, operates 24 fishery support vessels.[5] The 5 remaining vessels were probably inactive at the time the two companies took over the Lithuanian fishery fleet.

A separate fleet composed of 51 small trawlers, belonging mainly to 3 Lithuanian Baltic fishing companies (Neringa and Pajuris, former sovkhozes, and Baltija, a former kolkhoz), fishes on the Baltic Sea. Baltija is the largest of the 3 now privatized fishing companies; it owns 40 trawlers and 4 support vessels, and receives the lion's share of Lithuania's Baltic Sea catch quota.[6]

A. High-seas Fleet

As of late July 1993, Lithuania's high-seas fishing fleet was composed of 116 units (table 1) including 92 large and medium trawlers, as well as 24 refrigerated transports and other support vessels, including 3 tankers.[7] Most of the vessels were built in former Soviet and East German shipyards in the 1970s. The entire Lithuanian fishing fleet has a total gross registered tonnage (GRT) of over 448,000 tons.

Photo 1.—The Alitus is a 360 gross ton medium-sized Lithuanian stern trawler.

Photo 2.—A Lithuanian tanker of the Kaliningradneft-class supplies fuel to the country's distant-water fleets.

Lithuania

Geographic Indicators
Total area: 65,200 km²
Land boundaries: 1,743 km
Coastline: 99 km
Natural resources: Peat

Demographic Indicators, 1991
Population: 3,758,000
Growth rate: 0.8%
Birth rate: 15 births per 1,000 population
Death rate: 11 deaths per 1,000 population
Life expectancy: 66 years male, 76 years female
Ethnic composition: Lithuanian 80.1%, Russian 8.6%, Polish 7.7%, Other 3.6%

Political Indicators
Capital: Vilnius
Independence: declared independence 21 August 1991, regained independence from the Soviet Union on 6 September 1991
Chief of State: Chairman, Supreme Council Vytautas Z. Landsbergis

Infrastructural Indicators
Rail network: 2,100 km all 1.000 m guage, excludes industrial lines
Road network: 44,200 km of which 35,500 km is hard surface
Port: Klaipeda
Airport: Vilnius

Social Indicators, 1989
Health
Doctors: 40 per 10,000 persons
Hospital beds: 124 per 10,000 persons
Standard of Living
Housing: 19.1 m² per person
Food consumption: 3,496 calories daily per person of which 40 percent is grain products and potatoes
Consumption expenditures: 2,059 rubles per person
Savings: 2,496 rubles per person

Table 1. Lithuania. Fishing fleet, by selected vessel capacity; 1993.

Capacity	Number	GRT	Average GRT
Under 500 GRT	93	9,784	213
Above 500 GRT	116	428,756	3,696
TOTAL	209	448,540	2,146

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

The 116 vessels listed as having over 500 GRT are probably engaged in high-seas fishing, although some of the under-500-GRT vessels are likely involved as well. (For vessels by name, type of vessel, GRT, country and year of construction, see appendix 1)

B. Fleet Reduction

Between 1991 and 1993, Lithuania reduced its fleet by 9 vessels; 6 vessels were reflagged to other countries, and 3 units were decommissioned (appendix 2).[8] The largest of the reflagged vessels, a TAVRIYA-class refrigerated transport named *Sodel I*, was sold to a Nigerian owner. Several smaller fishing vessels were turned over to the registry of the neighboring former Soviet republics. The well-known flagship of the All-Union Scientific Research Institute for Fisheries and Oceanography (VNIRO), the *Akademik Knipovich*, was returned to Russian registry; its home port is now Kaliningrad where the Russian Western Scientific Research Institute for Fisheries and Oceanography (ATLANTNIRO) is located.

All three vessels withdrawn from fishing operations were over 25 years old. Their final disposition is not known.

C. Jura State Fishing Company

The JURA company is under the jurisdiction of the Fisheries Department in the Ministry of Agriculture. Located in the Baltic port of Klaipeda, it is the largest of all state-owned enterprises in the Baltics. Its vessels fish mostly on the high-seas and often sell their catch abroad to obtain hard currency. The two most important export markets are Spain and the Netherlands. About 30-50 percent of YURA's catch is sold in Western Europe and in countries off whose coasts the Lithuanians are catching fish. These sales bring in foreign currencies. Another 15-20 percent is sold to fish-processing plants in Lithuania and the remaining 50 percent is shipped to Russia, Ukraine and other former Soviet republics and sold for rubles which can be used to pay for diesel oil. These proportions were prevailing in 1991; more recent information indicates that the percentages are changing in favor of more exports to the West and less to the East, but the authors have been unable to secure reliable trade statistics documenting this shift.

YURA's assets are still Government property. The enterprise is continuing to operate with increasing losses, yet as far as it is known, no serious attempts have been made to privatize it. The losses are caused not only by the company's fishery operations, but also by other businesses into which it diversified. Some of these have been transferred to other Lithuanian ministries (for example, the fishing port, the shipyard storage plants, etc.), but two unprofitable investments (a resort village and a hotel) have not been sold or otherwise divested.

The company's director is appointed by the Lithuanian Government. The current incumbent is Valdas Trinkunas, a former director of the Lithuanian meat-producing combine. The management team is reportedly well-trained and capable, yet it could not prevent a loss of 1 billion rubles (about US$ 4 million) in 1992, on the gross revenues of 2 billion rubles.

In early 1992, when Lithuanian fishermen lost access to many of their traditional fishing grounds, the company leased 40 high-seas vessels to various foreign countries to preserve them in good order until sufficient catch quotas could be obtained to make it possible for Lithuanian fishermen to fully utilize the entire fleet.[9]

The JURA company also owns 12 shrimp trawlers which operate in the Barents Sea and off East Africa. Shrimp-processing lines have been installed on all of them by a Danish company. Most companies fish for shrimp in the Barents Sea under a Danish-Lithuanian joint venture. This J/V company, established before the dissolution of the former Soviet Union, apparently continues to exist under the new Lithuanian Government. It is not known whether the Russian Government allows the company to fish inside the Russian 200-mile zone, or whether it operates only in international waters of the Barents Sea. Two Lithuanian shrimp vessels were leased to a Malagasy company and fish off East African coasts. All shrimp landings are frozen and exported for hard currency.

III. FISHING PORTS

The Lithuanian fishing fleet operates out of a single port -- Klaipeda -- which has the advantage of being ice-free. Recently, the European Community (EC) authorized bids for the reconstruction of this port. Companies from Denmark, the Netherlands, France, Germany, Belgium, and the United Kingdom competed for the contract. The British consulting firm William Halerow and the Belgian Antwerpen Port Engineering and Consulting firms were selected. The project is being financed by the EC and should be completed in 8 months[10].

Klaipeda, Lithuania's only marine port, serves both fishing and commercial companies. A shipyard and two small vessel repair facilities are also located in the port area. The large BALTIKA Shipyard which previously built large freezer trawlers (BMRT) of the LUCHEGORSK class is obsolete, and currently does repair and maintenance work only.[11] In September 1991, however, the Shipyard completed a large floating dock for the Kamchatka fishing industry.[12] There are plans to modernize the Shipyard with up-to-date equipment so that the construction of fishing trawlers can again begin sometime in the future. Government subsidies would be needed, however, at least in the initial stages, for these plans to be realized.[13]

In the fishing port, there is also a fish-processing plant, the BALTIJA. The plant has a capacity of 20 tons of fish per day and has several canning lines. The canned fish are: jack mackerel (stavrida), Atlantic mackerel, Baltic sprats, and other species. The cannery cannot obtain a sufficient amount of fish to keep the 600 employees fully employed. Often they work only a half day. However, full salaries have to be paid to all the workers, and as a result the plant is not profitable and is badly in debt.[14]

IV. FISHERIES CATCH[15]

Lithuania's high-seas fleet obtains some 90 percent of its catch in the international waters of the Atlantic, and in the 200-mile zones of Canada and the Faroe Islands. Some fishing is also conducted off the coasts of several West African countries, presumably inside their 200-mile zones. The 1992 high-seas fisheries catch was 170,000 metric tons (t), down 48 percent below the 326,000 t catch in 1990. At its peak, the Lithuanian catch was approximately 400,000 t annually. Much of the 1992 decline can be attributed to the loss of access to fishing grounds inside the 200-mile zones of foreign countries that occurred as a result of Lithuania's independence from the former Soviet Union.

An estimated 55 percent (170,000-180,000 tons per year) of the Lithuanian high-seas landings was originated in the 200-mile zones of various coastal countries with which the former Soviet Union concluded bilateral fishery agreements. Among these countries were: Angola, Argentina, Canada, Guinea-Bissau, Mauritania, Nicaragua, Norway, Senegal, and Sierra Leone.[16] After the dissolution of the USSR, its bilateral fishing accords ceased to apply to the new Lithuanian State as of the end of 1991. Beginning in 1992, the Lithuanian Government had to obtain permission of coastal countries for access to their EEZ's on its own. Given the initial nonexistence of Lithuanian diplomatic missions in most of the above countries, this proved to be an arduous and almost impossible task.

The annual onboard fish-processing capacity of Lithuania's fleet is currently reported to be 268,500 t; its onshore processing capacity is 31,500 tons. Domestic demand approximates 65,000 t of processed fish per year; the remainder of the Lithuanian production - about 200,000 tons - is exported mostly to Ukraine, Belarus, and Russia, as well as to the East European markets. The fish landed from operations off West African and South American coasts is occasionally sold on the markets of the nearby coastal countries.

The 1992 Baltic catch was 10,000 t, which was over 44 percent less than the 18,000 t landed in 1990. Lithuania gets less than 5 percent of its catch from the Baltic Sea.

V. FISHING GROUNDS

The high-seas fleet operates mainly in the Atlantic, Indian and Pacific Oceans. The distant-water fisheries in Antarctica and in the southeastern Pacific have been abandoned because the increasing cost of fuel and the length of the trips made fishing there unprofitable.

The Lithuanian high-seas fleet also operates in the international waters of the Northwest Atlantic, beyond the Canadian 200-mile EEZ. The fishing in this area is governed by the North Atlantic Fisheries Organization (NAFO), which allocates the catch quotas to various countries. During NAFO's September 1992 Fourteenth Annual Meeting in Dartmouth (Canada), Russia, as the successor state to the Soviet Union, received an allocation of 37,300 t of various species, mostly redfish (27,000 tons). In negotiations, following the conclusion of the Annual Meeting, Russia transferred 12,000 t of its 1993 ocean perch (redfish) quota to

Latvia, Estonia, and Lithuania, with each country receiving a catch allocation of 4,000 tons. At the subsequent annual meeting, the Russian Federation obtained the 1994 catch allocation of 32,000 t, but its division among the Baltic countries has not yet been negotiated as of this writing.

VI. FISHERIES ADMINISTRATION

Prior to the dissolution of the Soviet Union, Lithuanian fisheries were administered as a subsidiary of ZAPRYBA, the Soviet Western Fisheries Administration. The subsidiary was named LITRYBPROM, an acronym for the Lithuanian Fisheries Administration. Its annual catch of about 350,000 t was worth 550 million rubles in 1990. This figure includes both the high-seas and the Baltic Sea catch. Of this total, about US$50 million worth of fishery products was exported, mostly through the Russian fish trading company, SOVRYBFLOT. LITRYBPROM's initial capital investment was reportedly 600 million rubles.

On August 27, 1991, LITRYBPROM was taken over by the newly established Lithuanian Government following the declaration of independence. The development of Lithuania's fishery policies is currently the responsibility of the Department of Fisheries which is under the administrative supervision of the Ministry of Agriculture. The current Deputy Minister of Agriculture in charge of fisheries is Almontas Rusakevicius. The management of fishery resources and the licensing of vessels allowed to fish in the Lithuanian economic zone is administered by the Ministry's Environmental Protection Department.

VII. BILATERAL AGREEMENTS

The Lithuanians are negotiating new fishery agreements to replace the Soviet ones that were assumed by Russia. In 1992 and the beginning of 1993, fishery agreements were concluded with Canada, Denmark (for the Faroe Islands), and the European Community; a Governing International Fisheries Agreement (GIFA) was signed with the United States.

Denmark: In the Baltic Sea, a Lithuanian-Danish joint venture, between the Baltija fishing company and an unknown Danish company, operates 40 small trawlers and lands up to 80 percent of Lithuania's 1993 Baltic catch quota of 10,000 t (which is 8,000 t less than it was in 1992). Another 11 trawlers are operated by the two other state-owned fishery cooperatives. The species caught include herring, sprat, cod, salmon, and flounder.

European Community (EC): On July 14, 1992, Lithuania initialed the draft of a fisheries agreement with the EC. The agreement would have entered into force upon ratification by the Lithuanian and EC authorities, but its current status is unknown.[17]

Faroe Islands: Lithuania concluded a bilateral fisheries agreement with the Faroe Islands (with the consent of Denmark). The agreement provides Lithuanian fishermen with a 1993 catch quota of 10,000 t of blue whiting in the Faroese EEZ. In exchange, Lithuania will allow Faroese fishermen to catch 5,400 t of various species in the Lithuanian EEZ in the Baltic.[18]

France: In late 1991, the former Lithuanian state fishing company, LITRYBPROM negotiated a joint venture agreement with the French company, APOMER. Under the contract, the Lithuanians would lease three medium refrigerated trawlers (probably of the MAYAK class) to fish off Sierra Leone and Senegal. The vessels would deliver their catch either to the adjacent African countries or to La Rochelle, the port in France, where the headquarters of the joint venture have been established.[19] It is not known whether this Lithuanian-French joint venture continued its contractual arrangement after Lithuania gained its independence and LITRYBPROM ceased to exist.

Sweden: At the end of January 1992, a quadripartite agreement was signed between Sweden and the fishery administrators of Estonia, Latvia, and Lithuania in Stockholm. The document defines the contested fishing grounds in the coastal areas of the Baltic Sea. An estimated 75 percent of fishery stocks in the area will be managed by the Baltic states.[20]

Lithuania's exclusive economic zone in the Baltic is the smallest of the three Baltic countries, consisting of only 99 kilometers of coastline. However, exact boundaries are still being negotiated with Latvia, Russia and Sweden. Foreign fishing in the Lithuanian zone is permitted on the basis of exchanges of fishing quotas of equivalent value. Such exchanges have been concluded with most of the Baltic littoral states.

VIII. OUTLOOK

Prospects for the Lithuanian fishing industry are cloudy. Its profitability appears marginal because of the lack of agreed access to prime fishing grounds under the jurisdiction of other states and the above-mentioned cost and supply uncertainties. Substantial subsidies from the Lithuanian Government are unlikely due to budgetary constraints and the poor outlook for the Lithuanian economy.[21]

Lithuania still relies mainly on Russia for deliveries of fuel and spare parts for its fleet. The breakdown of the centralized trading relationship with the former Soviet Union and price liberalization in the former Soviet republics, have worsened uncertainties in deliveries of spare parts and other equipment, as well as increasing significantly the cost of diesel fuel. During 1992/1993, many of Lithuania's high-seas fishing vessels were idle in port due to a lack of access to fishing grounds and the high cost of fuel.

SOURCES

Nordic Investment Bank. Baltic study. September 1991.

U.S. Embassy, Vilnius, 9 June 1993

U.S. Navy, Office of Naval Intelligence. 29 July 1993.

Valiukenas, Algimantas. "Fishery and Aquaculture of Lithuania." Vilnius, 21 October 1991. This 9-page manuscript devotes only 2 pages to the high-seas fishing fleet, grounds, and landings. Its emphasis is on the Baltic, freshwater, and pond fisheries, even though they contribute only 10 percent of the total Lithuanian catch. Mr. A. Valiukenas was the Director of Fisheries and Deputy Minister in the Lithuanian Ministry of Agriculture in 1991. It is not known if the manuscript was ever published or in what publication.

ENDNOTES

1. The length of the shoreline, however, is almost double that and measures 99 kilometers.

2. Nordic Investment Bank. Baltic study. September 1991.

3. JURA means "the sea" in Lithuanian.

4. A brochure published by the YURA company for the 1992 AGROBALT exhibition gives a slightly different figure: 136 high-seas fishing vessels instead of 124 such vessels. At that time, YURA employed over 10,000 persons and its fishermen were catching 320,000-350,000 tons of fish and shellfish.

5. Algimantas Valiukenas, "Fishery and Aquaculture of Lithuania," Vilnius, 21 October 1991. Valiukenas, the then Lithuanian Deputy Minister of Agriculture and the Director of the Fisheries Department, wrote in October 1991 that the high-seas fleet of Lithuania consisted of 130 vessels, owned by JURA, and 21 units owned by the State Transportation Fleet. The total of 151 vessels which Valiukenas cites is close enough to the figure of 148 high-seas vessels reported by the U.S. Embassy in June 1993.

6. U.S. Embassy, Vilnius, 9 June 1993.

7. U.S. Navy, Office of Naval Intelligence, 29 July 1993.

8. Ibid.

9. *Eurofish Report*, August 1992, based on a Vilnius Radio broadcast of 19 June 1992.

10. Radio Moscow, 18 August 1992. The reconstruction of Klaipeda must be finished by now, but the authors could obtain no information on this project.

11. U.S. Embassy, Vilnius, 9 June 1993.

12. Radio Vilnius, 18 September 1991.

13. U.S. Embassy, Vilnius, 9 June 1993.

14. Manager of the Klaipeda fishing port, Personal Communication, May 1993.

15. Sections III and IV are largely based on a report by the U.S. Embassy in Vilnius, dated June 9, 1993.

16. A large fishery off the United States, which continued for almost 20 years, was discontinued following the Americanization of the fisheries inside the U.S. 200-mile EEZ in the 1980s. The Lithuanian fishery off New England also generated a small crisis in US-USSR diplomatic relations when a Lithuanian fisherman (Mr. KUDIRKA) tried to defect during a courtesy visit to the U.S. Coast Guard vessel. KUDIRKA was forcibly returned when a Soviet detail which was allowed to come aboard the Coast Guard cutter dragged him back aboard the Soviet mothership, despite his claiming to be a U.S. citizen. KUDIRKA was later tried in a Soviet court in Riga and given a long jail sentence. However, when he proved that he was born in New York, the Soviets relented, released him and allowed him to emigrate to the United States. After a lengthy Congressional investigation, the U.S. Coast Guard officers who permitted the forcible return of the Lithuanian were retired from service. In the aftermath of the scandal, President Nixon issued a directive prohibiting the return of Soviet and other Communist defectors.

17. *Eurofish Report*, 30 July 1992; U.S. Embassy, Vilnius, 9 June 1993.

18. Faroese Statistical Bulletin, May 1993.

19. *Le Marin*, 29 November 1991.

20. Radio Russia, 27 January 1993.

21. U.S. Embassy, Vilnius, 9 June 1993.

APPENDIX SECTION

Appendix 1. Lithania. Fishing and fishery support fleet, by vessel name, class, gross registered tonnage, and country and year of construction; 1993.

Vessel name	Class	GRT	Country built	Year
1135		117	USSR	1991
Ablinga	ORLENOK	1,513	GDR	1986
Akhtubinskiy	MORYANA	2,405	USSR	1986
Akmene	KARELIYA	206	USSR	1974
Alaushas	KARELIYA	180	USSR	1972
Algaiba	ZHELEZNYAKOV	629	USSR	1971
Algenib	ZHELEZNYAKOV	775	USSR	1970
Alitus	LAUKUVA	359	USSR	1988
Alksnyne	ORLENOK	1,513	GDR	1985
Anyksciai	ORLENOK	1,513	GDR	1983
Archimedas	SPRUT	4,769	Poland	1979
Ariogala	ORLENOK	1,513	GDR	1985
Ariogala	LAUKUVA	359	USSR	1985
Asva	KARELIYA	180	USSR	1976
Atlasova Sala	OSTROV RUSSKIY	9,795	Sweden	1970
Aukstaitija	PROMETEY	3,932	GDR	1974
Aushra	GIRULYAY	282	USSR	1981
Ausra	KARELIYA	206	USSR	1972
Aviliai	KARELIYA	180	USSR	1972
Aviris	SHUSHVE	179	Bulgaria	1971
Baysogala	BALTIKA	108	USSR	1987
Betigala	BALTIKA	108	USSR	1985
Birstonas	MAYAKOVSKIY	2,693	USSR	1969
Birveta	KARELIYA	206	USSR	1977
Birzai	LAUKUVA	359	USSR	1986
Botnijos Ilanka	AMURSKIY ZALIV	12,891	France	1970
Chavycha	RR 151	255	GDR	1953
Dainava	LUCHEGORSK	2,581	USSR	1970
Dane	KARELIYA	180	USSR	1976
Daugai	LAUKUVA	359	USSR	1987
Debrecenas	ALTAY	3,468	Finland	1973
Disnay	KARELIYA	180	USSR	1973
Dotnuva	ALPINIST	720	USSR	1981
Druskininkai	MAYAKOVSKIY	2,693	USSR	1969
Dubingiai	LAUKUVA	3,519	USSR	1987
Dubisa	LAUKUVA	359	USSR	
Dukstas	ORLENOK	1,513	GDR	1985
Dusetos	MAYAKOVSKIY	3,162	USSR	1967
Dzukija	LUCHEGORSK	2,581	USSR	1972
Elektrenai	MAYAKOVSKIY	3,170	USSR	1969
Gargzdai	ZHELEZNYAKOV	775	USSR	1990
Girulyay	GIRULYAY	282	USSR	1979
Gulbe	MAYAKOVSKIY	3,170	USSR	1968
Ieva Simonaityte	MOONZUND	7,656	GDR	1990
Ignalina	KARL LIBKNEKHT	11,755	GDR	1974
Ionishkis	PULKOVSKIY MERIDIAN	4,407	USSR	1990
Jonas Biliunas	MAYAKOVSKIY	2,690	USSR	1968
Jonas Jablonskis	PROFESSOR BARANOV	13,571	Poland	1969
Jonava	PROMETEY	3,977	GDR	1975
Jura	KARELIYA	206	USSR	1974
Jurbarkas	PROMETEY	3,977	GDR	1974
Kafor	ZHELEZNYAKOV	775	USSR	1970
Kalvarija	PROMETEY	3,300	GDR	1973
Kapitonas Alfred Oja	MAYAKOVSKIY	3,170	USSR	1965
Kapitonas Ceslovas Bublys	PROMETEY	3,977	GDR	1977
Kapitonas Nikifor Pakulin	PROMETEY MOD A	3,147	GDR	1981
Kapitonas Nikolai Ivanov	MAYAKOVSKIY	3,162	USSR	1966
Katra	KARELIYA	206	USSR	1976
Kelme	LAUKUVA	359	USSR	1986
Kengarags	RADUZHNYY	633	USSR	1973
Khichik	RR 151	258	GDR	1956
Kiardla	ANDIZHAN	3,251	GDR	1962
Kintai	LAUKUVA	359	USSR	1989
Kriauna	KARELIYA	206	USSR	1976
Kristijonas Donelaitis	MAYAKOVSKIY	3,170	USSR	1966
Kulpe	KARELIYA	206	USSR	1977
Kursenai	MAYAKOVSKIY	3,012	USSR	1969

Appendix 1. Lithuania. Continued.

Vessel name	Class	GRT	Country built	Year
Kurshenay	MANEVRENNYY	169	USSR	1976
Kvedarna	GIRULYAY	282	USSR	1985
Kybartai	LAUKUVA	359	USSR	1989
Lasisa	ZHELEZNYAKOV	775	USSR	1989
Laukuva	PROMETEY	3,931	GDR	1974
Laukuva	LAUKUVA	359	USSR	1985
Likenay	KARELIYA	206	USSR	1976
Likenay	MANEVRENNYY	169	USSR	1976
Linkuva	KALININGRADNEFT	4,821	Finland	1980
Litkes Sala	OSTROV RUSSKIY	9,795	Sweden	1970
Lukstas	KARELIYA	206	USSR	1971
Luodis	KARELIYA	206	USSR	1973
Lydeka	ZHELEZNYAKOV	775	USSR	1982
Maironis	MOONZUND	7,656	GDR	1990
Menkar	ZHELEZNYAKOV	775	USSR	1969
Merkabas	ZHELEZNYAKOV	775	USSR	1971
Metelis	KARELIYA	206	USSR	1972
Mikalojus K Ciurlionis	MAYAKOVSKIY	3,170	USSR	1966
Minija	PROMETEY MOD A	3,977	GDR	1981
Mirfan	ZHELEZNYAKOV	775	USSR	1970
Mituva	KARELIYA	206	USSR	1974
Moletai	LAUKUVA	359	USSR	1987
Motiejus Valancius	PULKOVSKIY MERIDIAN	4,407	USSR	1989
MRTK 0652	BALTIKA	108	USSR	1983
MRTK 0657	BALTIKA	108	USSR	1984
MRTK 0694	BALTIKA	117	USSR	1986
MRTK 0756	BALTIKA	108	USSR	1989
MRTK 1003	BALTIKA	108	USSR	1974
MRTK 1009	BALTIKA	108	USSR	1974
MRTK 1010	BALTIKA	108	USSR	1975
MRTK 1026	BALTIKA	108	USSR	1976
MRTK 1027	BALTIKA	108	USSR	1976
MRTK 1032	BALTIKA	108	USSR	1976
MRTK 1036	BALTIKA	108	USSR	1976
MRTK 1042	BALTIKA	108	USSR	1977
MRTK 1044	BALTIKA	108	USSR	1977
MRTK 1094	BALTIKA	108	USSR	1984
MRTK 1113	BALTIKA	108	USSR	1987
MRTK 1124	BALTIKA	108	USSR	1989
MRTK 3207	BALTIKA	108	USSR	1974
MRTR 020	KARELIYA	206	USSR	1968
MRTR 021	KARELIYA	206	USSR	1968
MRTR 022	KARELIYA	206	USSR	1968
MRTR 027	KARELIYA	206	USSR	1970
MRTR 028	KARELIYA	206	USSR	1970
MRTR 0407	GIRULYAY	282	USSR	1982
Muse	KARELIYA	206	USSR	1977
Musha	KARELIYA	206	USSR	1973
Narvos Ilanka	AMURSKIY ZALIV	12,891	France	1971
Nemunelis	ALPINIST	720	USSR	1976
Neptunas	SIBER	5,942	USSR	1969
Neringa	PULKOVSKIY MERIDIAN	4,407	USSR	1990
Neris	ALPINIST	720	USSR	1973
Neva	PERVOMAYSK	3,321	Denmark	1959
Nevezis	KASPIY	1,058	GDR	1970
Nida	LUCHEGORSK	2,581	USSR	1971
Obeliai	ORLENOK	1,513	GDR	1985
Okainiai	ORLENOK	1,513	GDR	1986
Omar	KREVETKA	148	USSR	1975
Onuskes	ORLENOK	1,513	GDR	1984
Oven	ZHELEZNYAKOV	775	USSR	1971
Pabrade	TAVRIYA	3,556	USSR	1964
Pagegiai	ORLENOK	1,513	GDR	1984
Pajuris	ORLENOK	1,513	GDR	1984
Palanga	PROFESSOR BARANOV	13,123	Poland	1971
Panevezys	LAUKUVA	359	USSR	1987
Pasvalis	SPRUT	4,769	Poland	1980
Paulius Sirvys	PULKOVSKIY MERIDIAN	4,407	USSR	1987

Appendix 1. Lithuania. Continued.

Vessel name	Class	GRT	Country built	Year
Payuris	GIRULYAY	282	USSR	1980
Perlas	GIRULYAY	282	USSR	1984
Plateliai	ZHELEZNYAKOV	648	USSR	1973
Plutonas	SIBIR	5,942	USSR	1969
Radviliskis	KASPIY	1,058	GDR	1970
Raguva	SEVERODVINSK	10,026	Poland	1959
Rambynas	TAVRIYA	3,015	USSR	1968
Ramygala	ALPINIST	720	USSR	1976
Raseiniai	ALPINIST	720	USSR	1986
Rekiva	SHUSHVE	199	Bulgaria	1971
Rietavas	PROMETEY	3,933	GDR	1974
Rimkai	ALPINIST	720	USSR	1974
Rokiskis	KASPIY	1,058	GDR	1971
RR 1280	RR 151	258	GDR	1955
RR 1298	RR 151	258	GDR	1956
Rusne	LUCHEGORSK	2,581	USSR	1971
Rusu Sala	OSTROV RUSSKIY	9,795	Sweden	1969
Sakiai	ALPINIST	720	USSR	1987
Salantai	PROMETEY	3,933	GDR	1974
Salos	KARELIYA	206	USSR	1972
Saturn		104	USSR	1985
Saturnas	SIBIR	5,942	USSR	1969
Seda	ATLANTIK	2,154	GDR	1975
Seduva	ZHELEZNYAKOV	632	USSR	1971
Sesuvis	KARELIYA	206	USSR	1974
Siauliai	MAYAKOVSKIY	3,170	USSR	1967
Siesartis	KARELIYA	206	USSR	1977
Silale	SPRUT	4,769	Poland	1978
Silute	PROMETEY	3,977	GDR	1975
Siluva	LAUKUVA	359	USSR	1986
Simonas Daukantas	MOONZUND	7,656	GDR	1989
Sirvinta	KARELIYA	206	USSR	1975
Sisa	KARELIYA	206	USSR	1973
Skirvite	KARELIYA	206	USSR	1975
Stasys Girenas	RYBATSKAYA SLAVA	16,389	Germany	1965
Stasys Seinauskas	ALPINIST	720	USSR	1977
Steponas Darius	RYBATSKAYA SLAVA	16,389	Germany	1965
Sterkas	ZHELEZNYAKOV	775	USSR	1989
Streve	KARELIYA	206	USSR	1974
Strimele	KARELIYA	206	USSR	1975
Suduva	LUCHEGORSK	3,162	USSR	1973
Suomijos Ilanka	AMURSKIY ZALIV	12,891	France	1970
Sventoji	ATLANTIK	2,657	GDR	1972
Taurage	PROMETEY	3,977	GDR	1976
Telshay	PULKOVSKIY MERIDIAN	3,272	USSR	1986
Telsiai	PROMETEY MOD A	3,977	GDR	1982
Tituvenay	GIRULYAY	282	USSR	1985
Trakai	LUCHEGORSK	3,162	USSR	1973
Ula	KARELIYA	206	USSR	1977
Utena	ALPINIST	720	USSR	1977
Vaigale	GIRULYAY	282	USSR	1984
Varduva	KARELIYA	206	USSR	1975
Varena	ALPINIST	720	USSR	1977
Varniai	ALPINIST	720	USSR	1976
Venta	PROMETEY	3,977	GDR	1977
Venta	KARELIYA	180	USSR	1974
Verkne	KARELIYA	180	USSR	1974
Vertikalis	ZHELEZNYAKOV	632	USSR	1972
Vevis	GIRULYAY	282	USSR	1982
Vidunas	MOONZUND	7,656	GDR	1988
Vilkija	ORLENOK	1,513	GDR	1984
Virbalis	GIRULYAY	282	USSR	1982
Vistytis	KARELIYA	180	USSR	1974
Vite	MANEVRENNYY	169	USSR	1968
Vladas Rekashyus	MAYAKOVSKIY	3,162	USSR	1967
Yulyus Yanonis	PERVOMAYSK	3,321	Denmark	1959
Zagare	ZHELEZNYAKOV	775	USSR	1990
Zalgiris	ALTAY	3,674	Finland	1970

Appendix 1. Lithuania. Continued.

Vessel name	Class	GRT	Country built	Year
Zarasai	LAUKUVA	359	USSR	1986
Zeimena	KARELIYA	180	USSR	1974
Zemaite	PROMETEY	3,931	GDR	1976
Zemaitija	ATLANTIK	2,654	GDR	1970
Zigmas Angaretis	MAYAKOVSKIY	3,170	USSR	1960
Zuvintas	ALPINIST	720	USSR	1974

TOTAL = 209 vessels TOTAL GROSS TONNAGE = 448,540 GRT

Source U.S Navy, Office of Naval Intelligence, 29 July 1993

Appendix 2. Lithuania. Fishing fleet reduction, by vessel name, class, gross tonnage, year and country of construction, and disposition; 1993.

Vessel name	Class	Tonnage (gross registered tons)	Year Built	Built In	New Owner
VESSELS REFLAGGED					
Akademik Knipovich	MAYAKOVSkII	2,299	1964	USSR	Russia
Arinas	SHUSHVE	179	1971	Bulgaria	Latvia
Carolin	ALPINIST	720	1973	USSR	Estonia
Durbe I	ALPINIST	720	1988	USSR	Latvia
Plamja	KARELIA	206	1976	USSR	Latvia
Sodel I	TAVRIYA	3,308	1962	USSR	Nigeria
VESSELS NO LONGER ACTIVE IN FISHERIES					
Brizas	VETER	4,728	1964	Germany	*
Privolzhsk	AKTYUBINSk	5,217	1958	USSR	**
Y Greyfenbergeris	MAYAKOVSKII	3,170	1965	USSR	*

TOTAL = 9 vessels TOTAL GROSS TONNAGE = 20,547 GRT

Source U S Navy, Office of Naval Intelligence, 29 July 1993

* Inactive as of March 1993
** Inactive as of April 1992

3.0

THE COMMONWEALTH OF INDEPENDENT STATES

3.1

OVERVIEW

The Union of Soviet Socialist Republics (USSR) dissolved in December 1991, and most of the 15 component republics established a looser political association in the Commonwealth of Independent States (CIS). The Baltic States and Georgia chose not to join the CIS; as a result, only two republics with high-seas fishing capabilities were included in the CIS -- the Russian Federation and Ukraine. In October 1993, however, Georgia also asked to become a CIS member.

In the former Soviet Union, the fishery fleets of all republics operated as a unit divided only by the various Soviet administrative fishery regions. Russian, Ukrainian, and Georgian vessels all fished together in any particular fishing ground. Their fleets were under the administrative command of the regional administration which organized these so-called expeditions. A fleet of 30 to 40 large stern factory trawlers was managed by a fleet commander whose headquarters were aboard a large baseship. It did not matter from what Soviet republic the vessels originated, they were all part of this highly-organized fishing flotilla. The baseship received the catch from the trawlers, processed it, and passed it on to refrigerated fish carriers for transportation to homeport. The commander's flagship, supplied with fuel and other needs by tankers and cargo transports, distributed these supplies among its vessels. This system, which prevailed for the past 40 years, was suddenly disrupted by the new political arrangements. Each independent country now had to organize its own support and transportation activities, and obtain its own fuel (Georgia and Ukraine have no oil resources and must, therefore, buy diesel oil from Russia or other countries). In addition, the bilateral agreements which were formerly negotiated by the Soviet Ministry of Fisheries were no longer valid. The Russian Federation, as the internationally recognized successor state to the Soviet Union, took over most of these agreements. Ukraine and Georgia, thus, have to make their own arrangements to obtain access to foreign 200-mile fishery zones. Georgia is especially disadvantaged because its diplomatic corps and political leverage are limited.

All three CIS countries are currently undergoing a major shake-up of their economic systems. In Russia, the slow process of reform, until recently hindered by a conservative parliament, has made privatization more of a hope than a reality. In Ukraine, a severe economic depression has negatively affected the fishing industry. According to one report, only a third of the Ukrainian high-seas fishing fleet is deployed in harvesting aquatic resources. Georgia has been racked by civil war since January 1992 and no information is available on the fate of its fishing fleet following the invasion and occupation of its main fishing port at Poti by rebel troops on October 10, 1993. All CIS republics suffer from an inability to provide their fishing fleets with sufficient quantities of diesel fuel in a timely manner. Confirmed reports indicate that at times as much as a half of the Russian fleet was idling in various ports because of fuel shortages. Other reports describe an even worse situation whereby vessels already deployed on the high-seas had to stop their fishing operations because fuel tankers did not reach them on time. The authors have been unable to verify any fuel shortages in Ukraine or Georgia, but it must be assumed that a similar, if not worse, situation also prevails there.

The future of the CIS fishing fleets will depend on the ability of the three countries to obtain the necessary access to fishery resources to maintain the fleets' operations and provide abundant protein to the domestic population. Also important is the export of fishery products to earn hard currencies with which to modernize and replace the fleet, purchase diesel fuel, and support operations in foreign fishing zones. Joint fishery ventures with foreign companies and arrangements to lease, charter, or sell fishery vessels will become an important part of the future activities of the CIS fishery administrators. Russia has a natural advantage because its 200-mile exclusive economic zone contains some of the most prolific fishing grounds in the world. Ukrainian high-seas fishing operations will probably have to be reduced along with the fleet. The prospects for the Georgian fleet are bleak and it remains to be seen whether it can continue functioning.

Photo 1.--The former Soviet BMRT Betelgeze of the Luchegorsk class has been reflagged to the Russian Federation.

Commonwealth of Independent States

802042 (R00029) 7 92

3.2

RUSSIAN FEDERATION

Following the dissolution of the Union of Soviet Socialist Republics (USSR) in December 1991, the Russian Federation (Russia) was internationally recognized as the Soviet Union's successor state. Russia has not only retained the bulk of the Soviet fishing and fishery support fleet and at least one major port on all of the bodies of water bordering on the former USSR; it also has a substantial 200-mile exclusive economic zone containing some of the most prolific fishing grounds in the world. In addition, Russia inherited the extensive diplomatic and technical support network created by the Soviets to maintain their fishing operations abroad. Nonetheless, Russia's fishing industry has encountered many new and old difficulties since the country became independent. The industry has had to adjust to changes in the government's fisheries administration, economic reforms introducing a market economy, and the drive for privatization. A major problem is the Federation's current inability to provide its fishing fleet regularly with sufficient diesel fuel. The average age of the Russian fishing fleet is 15 years; fishery support vessels are even older. The future of the Russian high-seas fleet will depend on its ability to obtain the necessary fishery resources to maintain efficient operations. The export of fishery products to earn hard currencies with which to modernize and replace the fleet, purchase diesel fuel, and support operations in foreign fishing zones, will also play an important role.

CONTENTS

I. Background 94
II. Fleet 94
A. Historic Background 94
B. High-seas Fleet 96
C. Fleet Reduction 98
D. Fishermen's Productivity 98
E. Ports of Call 99
III. Vessel Construction 101
A. Domestic Shipyards 101
B. Foreign Shipyards 102
IV. Catch 106
V. Fisheries Administration 107
A. Committee on Fisheries 107
B. Fishery Attaches 108
VI. Bilaterals and Joint Ventures 109
VII.Outlook 121
Sources 122
Endnotes 123
Appendices 129
Map 145

I. BACKGROUND

The Russian Federation (Russia), formerly known as the Russian Soviet Federated Socialist Republic, is the largest country in the world. Its total area, encompassing 17.1 million square kilometers, borders on China, Mongolia, North Korea, Finland, Norway, Poland (Kaliningrad Oblast), and the former Soviet republics. Russia has a coastline of 37,653 kilometers, and its maritime boundaries are adjacent to 9 seas and 2 oceans. Its population of over 150 million people in July 1992 is among the largest in the world.

Russia's fishing industry represents only a small fraction of the country's huge economy, but it nonetheless produces commodities worth billions of dollars.[1] Fisheries production provides an important source of protein to the population as well as much-needed hard currency earnings. The Russian fishing industry is mainly based in the Far East (Vladivostok, Nakhodka, Madagan, Petropavlovsk-Kamchatskii and Yuzhno-Sakhalinsk ports), but about 20 percent of the catch is landed in the North (ports of Murmansk and Arkhangelsk), in the West (St. Petersburg and Kaliningrad ports), and in the South from Astrakhan on the Caspian Sea to Novorossiisk port on the Black Sea.

II. FLEET

A. Historic Background

The Russian people have been engaged in marine fisheries for centuries. In Czarist Russia, before World War I, the 1913 fisheries catch exceeded one million metric tons (t), one of the largest fishery harvests in the world at that time. Following the 1917 Revolution and the ensuing civil war, Russia's fishing industry suffered severe setbacks, and by 1920 only 260,000 metric tons of fish, shellfish, and other aquatic products were landed. The new communist regime, however, began to mechanize the outdated fishing fleet by introducing powered craft.

Pre-World War II: The Revolutionary Government established its first fisheries administration in March 1920 and provided it with 12 fishing vessels -- converted minesweepers. During the First Five-Year Plan (1928-32), the establishment of a trawler fleet in the Barents Sea was given priority. These programs were successful and by 1936 the Soviet Union's fisheries catch peaked at 1,600,000 tons. Further modernization of the fishing fleet and increasing catches were programmed for the second and third five-year plans, but Stalin's purges in the late 1930s stalled the rapid growth in all Soviet economic sectors, including fisheries.[2]

The Nazi invasion of the Soviet Union in June 1941 interrupted any further progress in developing the fishing industry. Most Soviet fishing vessels were sunk or disabled by German air or naval actions. The losses were especially severe in the Caspian and Black Sea fleets during the 1942 and 1943 German offensives. The northern Barents Sea fishing fleet, based in Murmansk, was also decimated. Only in the Far East, where the Soviets were not engaged in military operations until 1945, did a small and antiquated fishing fleet remain intact. When World War II ended in 1945, over 5,000 fishing vessels had been either sunk or extensively damaged.

Post-World War II: To rebuild the fishing fleet rapidly, the Fourth Soviet Five-Year Plan provided for a standardized construction of 150 side trawlers and over 13,000 smaller fishing craft. Despite these apparently large numbers, only a small part of the Soviet shipbuilding capacity was dedicated to the construction of fishing vessels as the main emphasis was on construction of ships for the Red Navy.

During the early post-World War II years, most of the Soviet fishing vessels were built in East Germany, where the Soviet Red Army was the occupying force. They were sent to the USSR as war reparations. Later on, when the German Democratic Republic (GDR) was organized under a communist leadership, the GDR remained the largest supplier of fishing and fishery-support vessels to the Soviet fishermen. Between 1951 and October 1990, when it ceased to exist, the GDR provided over 382 fishery vessels with a total gross registered tonnage (GRT) of 1.3 million tons to the Soviet Union.

As the Soviet Union's economic activity normalized somewhat in the late 1940s and early 1950s, the USSR began to make large purchases of fishery vessels abroad, especially from the neighboring Communist-ruled states (East Germany and Poland), where the Soviet Union had considerable political and economic leverage and could request the building of such vessels for its own fleet on a priority basis. (For additional details, see Part B of Section III on vessel construction in foreign countries.)

Expansion Southward: Two important developments promoted the rapid expansion of the Soviet fishing fleet buildup. After the death of Stalin in March 1953, the USSR Government embarked on an increasingly aggressive push southward into the world's oceans. For that, the fishing fleet needed large seaworthy vessels. Two major innovations have made this rapid expansion possible: the construction of large stern factory trawlers and the adoption of the flotilla fishing operations.

The first was the invention of a new method of high-seas fishing whereby a vessel brought its catch on board through a stern ramp rather than across the side. These new vessels, called stern factory trawlers (because they had a fishmeal processing plant on board), had greater stability and seaworthiness. They could use much larger nets hauling up to ten times the amount of fish hauled by a side trawler. In addition, these vessels could remain at sea for as long as one year while the crews rotated to and from homeports aboard fishery transports. The first stern factory trawler (the famous *Fairtry*) was developed by British naval architects, but the British industry did not immediately see its advantages and the idea died on the vine. The Soviets, however, bought the blueprint from a UK shipyard, and because they themselves lacked the advanced technology necessary for the construction of these trawlers in their own shipyards, ordered them from a shipyard in Kiel in the Federal Republic of Germany. These 24 German-built PUSHKIN-class stern trawlers (also known as the BMRTs to the Russians[3]) were the embryo of the future giant Soviet fishing fleet. As soon as the PUSHKINs were delivered, the Soviet naval architects copied the blueprints and soon the Soviet shipyards began to mass-produce them. In addition, the Soviets induced the Polish and the East German governments to follow suit. Before the 1950s ended, these three countries mass-produced BMRTs at a rate of 7-8 units a month.

The rapid Soviet expansion southward is evident from these statistics: in 1950, the Soviet fishermen harvested fishery stocks at the average distance of only 200 miles from the Soviet coast. Fifteen years later in 1965, the Soviet fleets fished almost 1,700 miles from the native shores, while by 1970 this distance was extended to over 4,000 miles.[4] Geographically, Soviet high-seas expansion was first directed towards the Atlantic. By 1956, Soviet vessels were fishing off the Newfoundland shores; by 1961, their operations extended to the Georges Bank off New England (where they surprised President Kennedy by fishing within sight of his home at Hyannis just outside the 3-mile territorial sea limit). In the following year, the Soviet fishing fleets appeared in the Caribbean heightening the already strong anxieties of the American public and government.

The second important innovation was the adoption of the flotilla fishing. The Soviets adopted it after studying Japanese fishery operations. The idea was that a fleet of fishing vessels operating far from its homeport should be able to remain at sea for extended periods of time to reduce the costs of transit to and from the grounds. The vessels must be supplied with fuel, water, salt, food, fishing gear, and maintenance facilities, while the fishermen must be provided with hospital and medical care. The Soviets called such flotilla operations "expeditionary fishing". A fleet of 30 to 40 large stern factory trawlers was managed by the chief of the fleet (*nachalnik flota*), whose headquarters were aboard a large base ship. He was in daily contact with the captains of his vessels by radio. The mothership received the catch from the trawlers, processed it, and passed it to refrigerated fish carriers for transportation to homeport. The *nachalnik*'s mothership was supplied with fuel and other needs by tankers and cargo ships, and distributed these supplies among the vessels which it serviced. It also had a hospital and dental services.

B. High-seas Fleet

The Russian fishing fleet consisted of 2,754 units having a total of over 6 million gross registered tons in 1993 (table 1). Of this total, the 1,999 units in excess of 500 GRT were high-seas vessels, and the remaining 755 units operated in coastal waters. The gross tonnage of the coastal fleet represented only 3 percent of the total tonnage of the entire Russian fishing fleet.

The total number of Russian fishing vessels, enumerated by the U.S. Office of Naval Intelligence, is almost identical with the number of "Soviet" vessels registered in June 1992 by Lloyd's of London (appendix i). This would be understandable except that the Lloyd's number supposedly also includes the Ukrainian, Georgian, Estonian, Latvian and Lithuanian vessels. That being the case, the total number should be much larger, probably by about 1,000 units.

Table 1. Russia. Fishing fleet, by selected vessel capacity: 1993.

Capacity	Number	GRT	Average GRT
100-500 GRT	755	156,985	208
Above 500 GRT	1,999	5,940,852	2,972
TOTAL	2,754	6,097,837	2,214

Source: U.S. Navy, Office of Naval Intelligence, 30 July 1993

Lloyd's data, although seemingly unreliable, are interesting in that they give a

historical overview of the Soviet fishery fleets. The number of the Soviet high-seas fishing (figure 1) and fishery support vessels (figure 2) was uneven, but basically was increasing over the past 17 years (appendices 1, 2, and 3).

The 1,999 units inherited by Russia include vessels of about 100 different classes which were constructed in 16 different countries (appendix 4[5]). The average age of Russia's fishing vessels is 15 years, while the fishery support fleet has an average age of 17 years. Many of these vessels have reached, or are approaching, obsolescence.

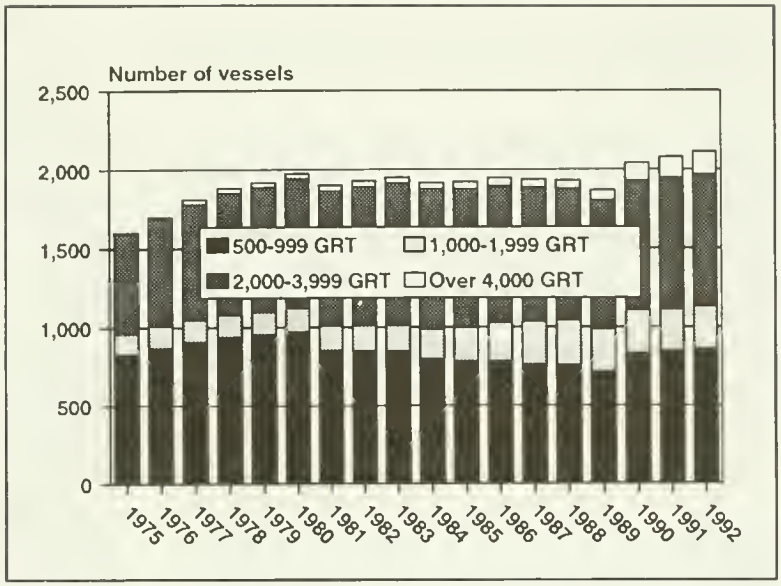


Figure 1. USSR. Number of fishing vessels, by gross tonnage; 1975-92.

One of the major problems in the years to come will be the replacement of aging and aged fishery vessels. This can be accomplished in two ways: first, by restructuring and modernizing existing fishing vessels and thus prolonging their useful life, and second, by purchasing new vessels, either from domestic or foreign shipyards.

It is believed that Russian fishery administrators will choose to purchase fishing vessels from foreign shipyards as the primary replacement method. Large amounts of scarce foreign currencies will be necessary to accomplish this. It is unlikely that such funds will be available from the regular budget of the Moscow Committee on Fisheries. Therefore, new, creative financing schemes will be required.

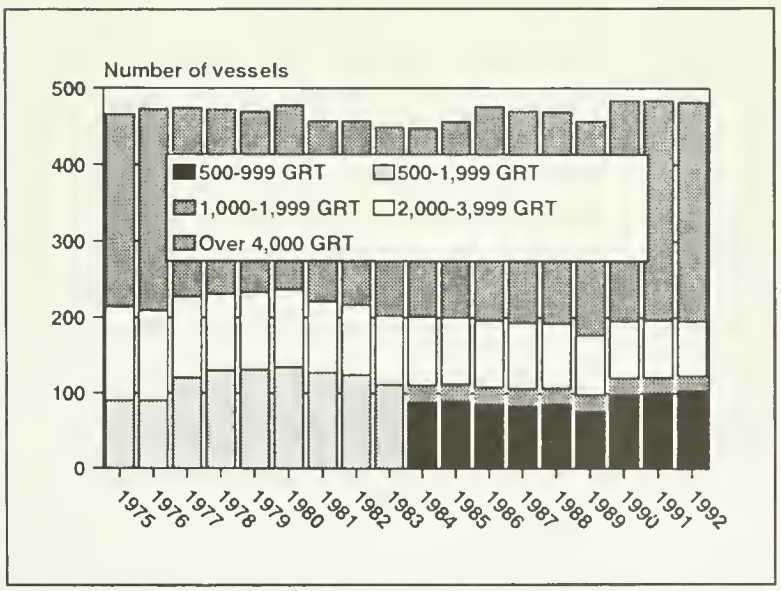


Figure 2. USSR. Number of fishery support vessels, by gross tonnage; 1975-92.

The August 1993 proposal by the Far Eastern Fisheries Administrator, Yuriy I. Moskaltsov, is an indication of what might be in store. Moskaltsov wrote a public appeal to the Russian Government spelling out his plan to modernize the Russian Far Eastern fisheries

fleet, the largest in the nation.[5] The main points of the article related to the fishing fleet are as follows:

1. The Russian Far East has about 3,000 fishing and fishery support vessels. Of this total, one-half will have to be scrapped, or otherwise disposed of, by 1995. The remainder will have to be replaced by the year 2000. Without such a radical program, the Russian Far Eastern fleet cannot become profitable.

2. The Far East has prepared a federal program titled "Ryba" (fish) which proposes, among other things, that the Far Eastern Fisheries Administration (DALRYBA) be given an official annual catch quota allocation of 200,000 t of Alaska pollock. By selling this catch quota to the highest foreign bidder at auction in Vladivostok, DALRYBA hopes to obtain about US$80 million which would be used to purchase replacement fishery vessels abroad.

To accumulate investment funds, Moskaltsov's plan also proposes that the Russian fishing companies (state-owned and privatized) which are part of the DALRYBA regional organization, be exempted from the customs duties until the end of 1996.[6] In addition, the DALRYBA companies should not be required to pay for diesel fuel in advance, and the Russian Government should authorize a special credit of 25 billion rubles to cover half of the debt which various Russian companies and state organizations outside the Far Eastern economic zone owe DALRYBA for purchased fishery products and other services.

C. Fleet Reduction

According to the U.S. Navy, Russia has reduced its high-seas fishing fleet by 34 units and 183,117 GRT during the last 2 years (appendix 5). Twenty-five vessels with a total of 152,603 GRT were reflagged to various countries, mainly Cyprus and Panama. About half of these were fairly new vessels, including 9 NEVELSK-class trawlers built in Norway in 1991 and 1992. This may indicate that they were probably reflagged for convenience only. The other 9 units are listed as inactive, but it is likely that they were scrapped for iron as they were between 26 and 38 years old.

Another 3 units, 2 huge processing baseships of the POSET class and 1 large stern factory trawler, were reportedly for sale in May 1993 by the Vladivostok Fishing and Trawling Fleet Base (VBTRF) which is trying to earn hard currency (appendix 5). It is not known whether these units have been sold.

The Russian high-seas fleets suffer from overcapacity, an abundance of aged vessels, and a dearth of available hard currency. It is therefore extremely likely that many more units than are known to the Navy have recently been scrapped, reflagged, or sold. This process of reduction, however, is probably occurring piecemeal, and at a rapid pace. As a result, little information is available except from official Russian sources which did not cooperate in the preparation of this report.

D. Fishermen's Productivity

The efficiency of the high-seas fishing fleet of the so-called "socialist" countries has been discussed many times, although there is little statistical or analytical information to

support an informed judgment. In 1976, the U.S. Congress requested from the National Marine Fisheries Service a review of the Soviet fishing industry, including an estimate of the productivity of Soviet fishermen.[7] The conclusion of this report was most unfavorable for the Soviets; it showed that every high-seas country selected for the study[8] had much higher productivity than the Soviet Union. The productivity of the Norwegian fishermen was 11 times greater than that of Soviet fishermen; the U.S. fishermen produced almost 6 times more for the same gross tonnage, and Japan produced over 5 times more. While it could be argued that the data for Norway and the United States, both coastal countries with small total fishing gross tonnage, cannot be easily compared with those of the widespread high-seas Soviet fleet, this argument could not be sustained vis-a-vis Japan. The latter operated its vessels in a manner not too different from that of the Soviet Union. Both operated large flotillas of fishing vessels, accompanied by motherships, refrigerated transports, and other support vessels to distant fishing grounds and both used large stern factory trawlers extensively.

The authors have tried to determine whether the productivity of the current Russian fishing fleet has improved over that of the former Soviet fleet.

In 1992, the Russian high-seas fishing vessels, numbering 2,217 units[9] with a gross registered tonnage of 3,006,082 tons harvested 5.8 million tons of fish and shellfish. The same year, the combined high-seas fleet of the European Community (EC), numbering 591 vessels with 718,000 GRT capacity landed 6,834,000 tons. A simple calculation shows that while the EC catch per one GRT equaled 9.5 tons, the Russian fishermen delivered only 1.9 tons for the same one gross ton, or five times less.

If we add to the Russian fishing tonnage also the Russian fishery support tonnage (251 vessels with a gross tonnage of 1,454,099 tons), the productivity of the Russian fishermen decreases further to 1.1 ton per gross registered ton.

As the EC has only a few fishery support vessels[10], the latter figure is better compared with the Japanese statistical data for the high-seas fleet.

In 1992, Japanese high-seas fishing vessels numbered 2,689 units[11] with a gross registered tonnage of 779,179 tons and harvested 8.2 million metric tons of fish and shellfish. The Japanese catch per one gross ton of fishing fleet is thus 10.5 metric tons, over 5 times more than the Russian catch.

Adding the smallish tonnage of the Japanese fishery support fleet (134 vessels having 45,571 GRT), the picture becomes even more favorable for the Japanese, whose fishermen harvested 10.0 metric tons per every ton of the fishery fleet.[12] This was 9 times better than the comparable 1992 harvest of Russian fishermen.

These statistics are admittedly only approximate[13], but they do give a good idea of what the current fishery administrators will be faced with when they try to bring the Russian fishing industry up to world standards.

E. Ports of Call

Operating far from their homeports, the numerous Russian large stern factory trawlers require special conditions for the

transshipment of the catch, refueling, resupplying, and vessel maintenance and repairs. These activities can become very difficult, and even dangerous, when heavy wave action on the high seas prevents the vessels from anchoring side-by-side. On the other hand, for a fishing vessel to unload its catch and refuel back in the distant homeport is prohibitively time-consuming and expensive. A fishing fleet, operating in distant waters may therefore seek the use of nearby ports. From 1950 through 1990, the Soviet Union established many bunkering and transshipment points wherever its vessels fished. These port arrangements have been inherited by the Russian Federation. Among the most important are Singapore (servicing Russian fishing fleets operating in the Indian and Pacific Oceans); the Canary Islands (servicing the fleets in the eastern Atlantic); Havana, Cuba (servicing the Russian fleets in the western Atlantic), and Vaccamonte, Panama (for vessels fishing in the eastern Pacific). Although these are the most important transshipment points, it must be stressed that at one time or another the Russian fishing fleets have bunkered in practically every major port of the world.

The Soviets usually establish joint venture companies in the ports they frequent. For example, in June 1975, they formed a seafood processing firm in Singapore jointly with the Development Bank of Singapore. The company, Marisco Ltd., built a large cold storage plant that processes and stores fishery landings unloaded from Soviet trawlers. Singapore's location, halfway between the Indian and Pacific Oceans, was ideal for the Soviet fishing fleet, which operated extensively in both.

Similarly, a Soviet joint venture with Spain, SOVHISPAN, has been functioning successfully since 1969 when it was established. The company's specific purpose was to develop a supply and transshipment base for the Soviet (now Russian) fishing fleets in the Canary Islands. New port installations have been built at Las Palmas and at Santa Cruz de Tenerife. The Soviet fishing crews were airlifted from the Canaries in a system of crew rotations; the base was also used as a rest and recreation point. Its significance as a trading center for Soviet/Russian fishery products has been well known to the world's fish trading companies, especially in Western Europe.

In Havana, Cuba, the establishment of a Soviet fisheries base soon became a politically charged subject, especially when the Castro regime, backed by the Soviets, used fishing vessels to launch terrorist attacks in an effort to destabilize the neighboring countries in Latin America. The Soviet fisheries agreement with Cuba demanded a much greater degree of cooperation than did the commercial arrangements with the Canaries and Singapore. The Soviet Ministry of Fisheries, no less than the Ministries of Defense and Foreign Affairs, recognized the excellent possibility of establishing a base for distant-water fishing fleets on that strategically located island and, at the same time, cementing political relations with Cuban revolutionaries. The Soviet Union desired Cuba as a fishing base as much as the Cuban government desired the rapid development of its marine fisheries. The Soviets promised to build Cuba a modern fishing port, if the Cubans would permit the USSR to use it as a major base for its fisheries expansion in the central and southern Atlantic. The agreement on the construction of the fishing harbor was signed in Havana on 25 September 1962 by the Soviet Minister of Fisheries, Alexander Ishkov, and Cuban Prime Minister, Fidel

Castro. The Cuban missile crisis delayed somewhat the beginning of construction, but after the U.S. naval blockade was lifted, excavations began and the Havana Fishing Port was officially opened on 26 July 1966, the seventh anniversary of Castro's rise to power.

III. VESSEL CONSTRUCTION

The Russian fishery fleet, inherited from the Soviet register, was constructed both in foreign and domestic shipyards. During the first decade after the end of World War II, the priority emphasis was on the construction of vessels for the Red Navy. When the Soviet Government decided to expand its fishing operations southward into the Atlantic, the Ministry of Fisheries could not obtain a sufficient number of vessels from domestic shipyards and began to make large purchases abroad. It was only natural that the USSR's first orders were placed in the neighboring countries of Finland, East Germany and Poland. Later on, many West European countries also built fishery vessels for the Soviet Union.

A. Domestic Shipyards

The former Soviet Union had at least one shipyard to build or repair fishing vessels in most of its major ports, and in many of its minor ones (appendix 6). Several shipyards had both a construction and a repair section. These shipyards built over 50 classes of high-seas fishing vessels (appendix 7) for the Soviet fleets, the fishing fleets of Eastern Europe and other countries.

The authors have not carefully followed the construction of Soviet fishery vessels in domestic shipyards, simply because it is too time-consuming an effort. From recent publications, the construction at two of the above-listed shipyards is cited below. These are simply illustrations of the fishery vessel construction still taking place in Russian shipyards. Complete information on Russian additions would have to be obtained from the Russian Committee on Fisheries.

In April 1993, the KIROV Shipyard in Khabarovsk completed the 91st vessel in a series of refrigerated transports that the shipyard has been producing for the last 20 years. The vessels are constantly being upgraded and the latest are equipped with satellite communication and other sophisticated equipment. The new vessel is going to the port of Vladivostok. The Shipyard plans to build 5 more refrigerated transports and 2 medium fishing vessels in 1993.[14]

The Volgograd Shipyard on the Volga River recently completed a medium refrigerated trawler, the *Avachinsky*, for Kamchatka fishermen. The vessel will be based in Petropavlovsk-Kamchatskii (which has been steadily receiving new fishing vessels as replacements for the Kamchatka fishing fleet) and will fish for Alaska pollock. In 1991, this Shipyard also completed the seiner-trawler, *Dmitri Shevchenko* for the Nadibaidze Seiner Fleet in Primorye.[15]

In 1992, in response to the end of the Cold War and the breakup of the Soviet Union, Russia planned to decrease its military, while increasing its civilian (including fishing vessels) shipbuilding production.[16] An example of this trend was recently described in the Vladivostok media:

In early 1992, the ZVEZDA Shipyard located in Bolshoi Kamen near Vladivostok, (this shipyard was formerly building military vessels , especially nuclear submarines, for the Ministry of Defense), began building refrigerated fishery vessels. The Shipyard has a contract to build 12 such vessels, the first of which is scheduled to be completed in early 1993.[17]

B. Foreign Shipyards

A total of 3.5 million gross registered tons was added to the Russian fishery fleet in 756 vessels built in foreign shipyards. These deliveries are described in appendix 8 both by country and the class of vessels. It must be pointed out that this appendix lists only vessel classes that were in the Russian registry in July 1993. Foreign shipyards have built many more vessels during the 1951-1993 period, but these have been scrapped, reflagged, sunk, sold, or otherwise decommissioned and are no longer on the Russian registry of fishing and fishery support vessels. To illustrate with a few examples: in the early 1950s, the Stralsund shipyard in the former German Democratic Republic built over 60 TROPIK class stern factory trawlers for the Soviet registry. By 1993, there is not one single vessel of this class left and appendix 8 does not even list it. The entire class (over 160,000 gross tons) was scrapped.[18] Similarly, the first series of 24 stern factory trawlers (PUSHKIN class) which were built in the Federal Republic of Germany from 1955 to 1958 are no longer operational. This is no wonder since this vessel class was designed to be in service for 30 years. Examples like the two above could be given by the dozen, but neither time nor space permits it. A rough estimate would be that the foreign shipyards have built another million gross registered tons of fishing vessel capacity for the Soviet Union and that most of it has been scrapped or otherwise decommissioned.

A perusal of the 16 countries which have been selling fishing and fishery support vessels to the Soviets is illuminating. It is clear at first glance that two-thirds of the gross tonnage was built in East Germany and Poland, where the Soviet Union had considerable political and economic leverage and may have been bartering vessels for other commodities. A total of 2.4 million gross registered tons was constructed in those two countries. These opportunities, however, have now diminished with the disappearance of the German Democratic Republic and the end of the Communist regime in Poland. In the last few years, Russia has been ordering fishing vessels from Sweden, Portugal, Spain, and Norway. In these countries, the payments must now be made in hard currency. It is estimated that the Russian Federation has on order, or had accepted deliveries for almost a billion dollars worth of fishery vessels from West European shipyards during the past few years. Most of these vessels are state-of-the-art constructions which will make future Russian fishermen far more productive than their fathers were.

Some of the most recent deliveries are as follows:

Denmark: In 1990, the former Soviet Ministry of Fisheries received 4 KOMANDOR-class, specialized fishery protection vessels from the DANYARD Shipyard. These vessels (2,618 GRT), which were designed to perform tasks of fishery inspection by helicopter, offshore surveillance, and support work for the Soviet fishing fleet, were the first vessels acquired by the USSR, especially for fisheries

protection. These vessels operate in the Russian fishing grounds in the Japan, Okhotsk, and Bering Seas.

In January 1990, the USSR received the first vessel, *Komandor,* which was registered in Vladivostok and deployed in Arctic waters. The *Komandor* (88.3 meters long) is equipped for towing and rescue work in severe weather, and has a helicopter landing pad. The second vessel was bought by PRIMORRYBVOD and went to the Far East in February 1990. The third and fourth vessels both arrived in the Far East in mid-1990.

These four vessels (*Komandor, Kherluf Bidstrup, Manchzhur, Shkipper Gek*), however, are insufficient to protect the Russian Far Eastern fisheries. It was expected that the conversion of several defense facilities to civilian production might allow the USSR Ministry of the Shipbuilding Industry to begin producing specialized fishery protection vessels in Russian shipyards.[20] The current status of this plan, however, is unknown.

East Germany: The former German Democratic Republic has been building factory trawlers in its STRALSUND People's Shipyard for the past 35 years. Known as the ATLANTIK-class stern factory trawlers, these highly adaptable vessels are capable of catching large quantities of fish anywhere in the world's oceans.

The Germans have redesigned the ATLANTIK prototype three times and each modernized version was avidly bought by the Soviets. The first version, the ATLANTIK I class was constructed from 1966-76; the second, the ATLANTIK II or PROMETEI class, was built from 1971-83; the third, the ATLANTIK III or ORLENOK class, was built from 1981-87; and the fourth, the ATLANTIK IV or MOONZUND class, was introduced in 1988. Its construction continued until 1991 when STRALSUND stopped building fishing vessels.

Of an estimated 600 ATLANTIKs built at Stralsund, over 500 trawlers were sold to the former Soviet Union. Together with Soviet domestic construction and imports of similar vessels from Poland, the German trawlers constituted the backbone of the Soviet high-seas fishing fleet. When the USSR broke up, the ATLANTIKs were divided among the successor republics (table 2).

Table 2. Distribution of ATLANTIK class fishing trawlers among the former Soviet republics: 1993.

	RUS	UKR	LAT	LITH	EST	GEORGIA	TOTAL
ATLANTIK	80	46	9	3	2	7	147
PROMETEI	89	43	10	15	9	3	169
ORLENOK	99	10	16	11	13	-	149
MOONZUND	15	8	-	4	6	-	33
TOTAL	283	107	35	33	30	10	498

Source: U.S. Navy, Office of Naval Intelligence, July 1993.

The last Soviet order was for 45 ATLANTIK IV supertrawlers of which the East German shipyard built and consigned 33 units. The deliveries were stopped in 1991 when the East Germans, now unified with the Federal Republic of Germany, began to demand payment in hard currencies which the Russian Federation could not provide.[21]

Seven of the 12 undelivered supertrawlers are in the process of being released to Russia. These 7 MOONZUND-class vessels were ordered as part of a previous multi-vessel

contract, but the deal was renegotiated twice, once when the two Germanys united, and again after the Soviet Union dissolved. The latest renegotiated contract has the Russian Committee on Fisheries paying US$225 million for the vessels. The trawlers are being delivered 2 each to the trawl fleets of Murmansk (*Boris Syromyatnikov and Kapitan Bogomolov*), and Arkhangelsk (*Kapitan Bubnov and Pomor*); these 4 trawlers left Stralsund on February 5 and 9, 1993, respectively; the other 5 were expected to leave, one every 2 weeks until May 3. The Kaliningrad Trawl Fleet received the *Rybak* and *Nekrasovo*, and the seventh vessel, the *Tosno*, will go to the Leningrad Fisheries Production Association, LENRYBPROM.[22]

A dozen of the ATLANTIK-III class vessels, purchased from Stralsund, were assigned to the Soviet fisheries research fleet. They were distributed as follows: the Polar Scientific Research Institute for Fisheries and Oceanography (PINRO) in Murmansk - 3 units; the Atlantic Institute (ATLANTNIRO) in Kaliningrad - 3 units; the Southern Seas Institute (YUGNIRO) in Kerch - 2 units; and the Pacific Institute (TINRO) in Vladivostok - 4 units. Those still owned by Russia are: *PINRO, TINRO, Professor Kaganovskiy, Professor Kizevetter, Professor Levanidov, Professor Marti, Professor Soldatov, ATLANTNIRO, Atlantida, Frithof Nansen.* The names of the 2 YUGNIRO units are not known, but they probably now belong to the Ukrainian Fisheries Research Institute.

The German company, Elbewerft Boizenberg GmbH Shipyard, located in eastern Germany on the Elbe River, is constructing 30 longliners to be deployed mainly in the Far East for the Okhotsk Fishing Company which is registered in Cyprus.[23] The first of these vessels, the *Antias*, was due for delivery in August 1993, and the second, *Kaprodon*, soon afterward. The vessels are being fitted with Norwegian autolines for longline fishing, and processing lines which will allow the vessels to process up to 25 tons of fish a day.[24]

Finland: In the mid-1980s, the former Soviet agency, SudoImport, ordered three large crab processing motherships (SODRUZHESTVO class, 180 meters long; 32,096 GRT each) from the Rauma-Repola shipyard in Rauma, Finland. The first of these, the *Sodruzhestvo*[25], was launched in September 1987, and delivered to Vladivostok in March 1988 for the Sea of Okhotsk and the North Pacific fisheries. The second vessel, *Piotr Zhitnikov,* was also delivered to the Far East in May 1989. It is identical to the *Sodruzhestvo* except that it underwent some modernization. The third vessel, *Vsevolod Sibirtsev*, was launched in March 1989 and delivered by the end of that year.[26]

On September 10, 1987, Rauma-Repola delivered a research and survey vessel, *Akademik Fedorov* (140 meters long), to GOSKOMGIDROMET. The vessel has full ice-breaking capabilities for operation in the Antarctic. Another research vessel, *Akademik Ioffe*, built in Rauma in February 1989 is based in Kaliningrad to conduct research in the Atlantic.[27]

Norway: In late Summer 1993, the Vladivostok Trawl and Refrigerated Fleet (VBTRF) received two longliners (*Kapitan Kartashov* and *Kapitan Samoilenko*) from the Soviknes Shipyard in Sovik, Norway, as part of a plan to modernize its fleet. Their longlines are equipped with some 30,000 hooks to catch Pacific cod, halibut, sablefish, and other bottom species in the so-called "hard" grounds with rocky bottoms and

irregular depths where bottom trawling is unsafe.[28] They are designed for onboard processing, with sophisticated, ecologically-clean equipment, including fillet-making machines capable of processing 25 metric tons of fish per day. They are also equipped with modern radar, navigation, and communication systems. The vessels were financed by the Japanese firm, Nichimo Co., Ltd. of Tokyo, under a contract which obligates the Russian owners to deliver the processed catch to Nichimo.[29]

Russian fishermen will learn longlining aboard a Norwegian training vessel which is due to be built. This project is part of a joint venture between six Norwegian companies and the SEVRYBA.[30]

In mid-1992, the KIMEK A/S Shipyard in Norway signed a contract to build and equip 100 coastal fishing vessels for Russia. The contract is part of an effort to restructure the Russian fleet so that coastal, rather than high-seas, fisheries will be emphasized. The vessels will vary in size from 40-60 meters long and are expected to be completed in 4-5 years.[31] No further information on this contract is available.

In 1989, the former Soviet Ministry of Fisheries contracted 20 large stern factory trawlers (NEVELSK class, 64 meters long, 1,899 GRT) from the STERKODER Shipyard of Norway for deployment in the Russian Far East. Reportedly, the first 16 vessels were delivered to the former USSR, but the last four were repossessed by a Norwegian bank because the Russians were unable to pay for them. One of these four vessels was bought by the company of a Norwegian businessman, Arne LARSSON, and leased to a Kamchatka import-export company, KAMCHATIMPEX, to fish in the North Pacific under Russian flag, captain, and crew.[32]

Despite news reports that a series of 16 NEVELSK class vessels were delivered to the USSR/Russia, NMFS could confirm that currently only 9 of these vessels are registered in Russia.[33] Another 4 NEVELSK class trawlers, the *Amaltal Columbia, Mys Vindis, Petr Iljin, and Sterkoder*, have been reflagged: the *Amaltal Columbia* now flies a New Zealand flag, the other 3 operate under the Cypriot flag.[34] ONI's list of the Cyprus fishing fleet includes 8 NEVELSK class units; 3 are the reflagged vessels mentioned above. The names of the others are: *Admiral Zavoika, Aleksei Chirikov, Bukhta Naezdnik, Novik,* and *Vilyuchinskyi*. This accounts for 18 of the 20 NEVELSK-class vessels ordered from Norway.

Poland: In 1988, a Gdansk shipyard completed a series of 6 large trawlers of the IVAN BOCHKOV class for the Soviet Northern Fisheries Administration (SEVRYBA) fleets, including the *Sovetskaia Konstitutsia*, *Zavolzhsk*, and the *Revolutsiya* which joined the Arkangelsk fleet.[35] Russia currently owns 33 of these vessels which were constructed between 1979 and 1988.[36] Polish shipyards also built many other classes of fishing vessels purchased by the USSR for a total tonnage of 1.1 million gross tons (appendix 8).

Spain: Since 1989, the former USSR/Russia has ordered 25 vessels, 15 large stern factory trawlers and 10 tuna purse seiners, from Spanish shipyards.[37]

The former Soviet Ministry of Fisheries ordered 15 stern factory trawlers of the SOTRUDNICHESTVO class (7,805 GRT, 105 meters long) through the Bergen

Industries and Fishing Corporation of Monrovia, Liberia, from the Factorias Vulcano and the Naval Gijon shipyards of northern Spain. The first 2 trawlers, the *Sotrudnichestvo* and the *Stimul*, were delivered to Russia in December 1991. Dantrawl A/S of Denmark fitted the 2 trawlers with Alaska pollock trawls newly designed especially for these vessels.[38]

The 9th vessel (*Vladimir Starzhinskiy)* in the series of 15 Spanish-built trawlers was completed in May 1993, and the 10th vessel (*Mikhail Drozdov)* was scheduled for delivery in August 1993, when the 11th vessel *(Kapitan Nazin)* was to be finished. The last 4 vessels are expected to be completed two at a time and scheduled for delivery in January and June of 1994.[39]

The largest Russian Pacific fishing company, the Vladivostok Trawler and Refrigeration Fleet Base (VBTRF) is to receive 10 out of the 15 ordered trawlers (including, the previously delivered *Kapitan Azarkin*, *Stimul*, *Sotrudnichestvo*, *Suverenitet*, *Solidarnost*, *Stanovlenie*, and *Sozidaniye*) and operate them in the Bering and Okhotsk Seas.[40]

The *Vladimir Starzhinskiy*, was delivered to the North-East Russia Marine Resources Company based in Sovetskaia Gavan, Khabarovsk Region. This company has also ordered several refrigerated trawlers from a shipyard in Barcelona.[41]

The former USSR ordered 10 tuna seiners (80 meters long) from the Astilleros de Huelva Shipyard in southern Spain through the Pythagoras Shipping Company of Liberia. The first vessel was delivered in July 1991 and the last in December 1992. The first five vessels (including the *Tivela, Kaouri, Purpura, Tellina*[42], and *Pinna*) joined Russia's Kaliningrad-based fleet; the second five seiners (*Rodios, Gomer, Platon, Aristotel, and Demosfen*) are operating out of Vladivostok in the Far East. They will mainly fish for tuna in the Atlantic and Indian Oceans.[43]

IV. CATCH

The Soviet fisheries catch expanded rapidly after Stalin's death in 1953, and, fueled by massive investments in the fishing fleet, exceeded 10 million metric tons (t) by 1976. After worldwide extensions of fishery jurisdictions to 200 nautical miles in 1976-77, the Soviet fisheries catch, much of which was harvested in now foreign waters, decreased for a few years. Assisted by profitable joint ventures and useful bilateral fishery agreements, Soviet fishermen continued to expand their catch in the 1980s. In 1989, the Soviet Union became the world's largest fishing power (in terms of catch landed), surpassing Japan for the first time. Soviet fishermen landed 11.3 million t of fish, shellfish, and other aquatic products in 1989. This glory, however, was short-lived; in 1990, its was China that harvested the world's largest catch.

In the next few years, the Soviet catch began to decline steadily by about one million tons a year, so that by 1991 only 9.2 million t were landed (appendix 9).

In December 1991, the Soviet Union dissolved and the catch is now being reported to FAO by its former constituent republics which engage in high-seas fishing: the three Baltic states, Russia, Ukraine, and Georgia. The FAO in Rome is reportedly trying to

reconstruct the historical catch statistics of the new independent countries. To accomplish that, the FAO will need the full cooperation of the former Soviet Fisheries Research Institute (VNIRO) in Moscow. The authors have been able to obtain the recent statistics for the Russian catch (table 3). These data show that the catch began decreasing in 1989, at first slowly, but in subsequent years at an increasing pace. The 1992 estimated catch of 5.8 million tons is 16 percent below the amount landed the previous year. The decrease in the catch will likely continue in 1993, but, hopefully, not at such a steep rate.

Table 3. Russia. Fisheries catch and percent change from previous year: 1987-92.

Year	Catch	Change
	Metric tons	Percent
1987	8,079,000	-
1988	8,102,000	0 1
1989	7,977,000	-1 5
1990	7,562,000	-5 2
1991	6,711,000	-11 3
1992	5,800,000(E)	-15 7

Source Various Russian publications

E - Estimated

Appendix 9 shows the Soviet catch in various FAO statistical areas. The largest amount continues to be harvested in the FAO statistical area 61 which includes the fishing grounds within the Russian Pacific 200-mile fishery zone. The second largest catch is off the western coasts of Africa where the Soviets/Russians have traditionally had extensive fisheries. The Barents Sea (FAO statistical area 27) continues as the third largest fishing ground for the Russian fleets, even though its importance has decreased greatly since 1975.

V. FISHERIES ADMINISTRATION

A. Committee on Fisheries

The Committee on Fisheries is the direct successor of the former Soviet Ministry of Fisheries, but it no longer controls the fishing industries of the 15 republics which were constituent parts of the former USSR. The Committee now maintains control only over the fisheries of the former Russian Soviet Socialist Republic. In the Soviet Union, the fishing industry was organized into five so-called main regional directorates. They were located in Murmansk for the north, in Riga for the west, in Sevastopol for the south, in Astrakhan for the Caspian Sea, and in Vladivostok for the Far Eastern Region. Almost 800,000 people were employed in this widespread fisheries empire.

After the dissolution of the USSR in December 1991, only the Far Eastern and the Northern fishery administrations remained intact and were absorbed by the newly-organized Committee. In the west, the three Baltic states (Estonia, Latvia, Lithuania) became independent and organized their own fishery administrations. The headquarters of the Western Fisheries Administration were transferred from Riga to Kaliningrad. Together with the St. Petersburg Oblast (Province) fisheries, the Kaliningrad fisheries are the only remaining parts of the Western Administration. The Southern Regional Fisheries Administration, also known under the acronym YUGRYBA, is now in the Republic of Ukraine. Sevastopol remains the headquarters of this administration, but the policy directions are no longer received from Moscow, but from Kiev. The Caspian Sea has been divided into four parts claimed by

the adjacent states of Turkmenistan, Kazakhstan, Azerbaijan, and Russia. The final delimitations of this sea are being negotiated. Being a land-locked sea, no high-seas fleet operates there. The Far Eastern Regional Fisheries Administration (DALRYBA) also remains intact and has now become the most important fishing region in the new Russian Federation. As much as 70 per cent of the total Russian catch is now being harvested by the Far Eastern fishermen.

The Russian Committee on Fisheries employed an estimated 500,000 persons before the privatization of some of its regional components.

The political vicissitudes of the transformation of the former Soviet Union into the Commonwealth of Independent States affected the Committee on Fisheries as well. In August 1991, the Soviet Fisheries Minister, Nikolai Isaakovich KOTLYAR, and his six assistant ministers supported the putschists and ordered the captains of the fishing fleets to follow their directions. When President Yeltsin prevailed, Kotlyar was promptly fired, the Ministry of Fisheries was abolished and its staff transferred to the Russian Ministry of Agriculture. Fishery executives, who were used to policy and budgetary independence and were very powerful in the old Soviet Union, did not like the move and did all they could to get from under the Ministry of Agriculture. They succeeded and, in early 1992, the Committee on Fisheries of the Russian Federation was organized as an independent agency. Its staff, however, was reduced from over 1,200 employees to only about 400 persons.

The Committee took over most of the former Soviet bilateral and multilateral fishery agreements. Of the 59 bilateral agreements, Russia carried on the privileges and responsibilities of 40 agreements. Of the 14 multilateral fishery organizations to which the Soviet Union belonged, Russia retained its representatives at 11. As one of the largest fishing powers in the world, the Russian Federation thus maintains a powerful presence on the international fisheries scene.

B. Fishery Attaches[44]

The Russian Committee on Fisheries also retained 30 out of 32 fishery offices in as many countries (appendix 10). These offices are located primarily in coastal countries where the incumbents play an important role in organizing support for the wide-ranging, distant-water Russian fishing fleets.

The total number of Russian fishery attaches and representatives is much greater since most offices also have an assistant fisheries attache or representative. Some (like Tokyo, Oslo, Halifax, and Rome) have 3 or more fishery attaches. All Russian fishery attaches enjoy diplomatic status. They are located in Australia, Denmark, Italy, Canada, Norway, the United States, Japan, and possibly some other posts. On the other hand, representatives of the Russian Committee on Fisheries do not have diplomatic status. Both, however, remain the employees of the Russian Committee on Fisheries and receive salaries from the Committee directly.

The funding for this vast network of fishery attaches and representatives is provided by the Russian Committee on Fisheries (formerly the Soviet Ministry of Fisheries). It could not be determined what the total budget amounts to, but it is estimated at about $3 million. This includes salaries and benefits, office rents, paid vacations,

travel expenses, operational expenses, etc. The Committee receives these funds from various regional fishery administrations (now share-holding "companies") who sell fishery products abroad. This includes the joint venture company, SOVRYBFLOT.

The administrative needs of fishery representatives and attaches are handled by the Division of International Affairs of the Committee, headed by Vadim NIKOLAEV. Each of the 4 geographic sections of the Division handles the fishery offices located in its region. The staff of the Division is limted and the servicing of that many officers abroad often represents an unbearable administrative burden for the able and dedicated officials of the Division. One must also consider that the Division handles foreign visitors to the Committee through its efficiently run Protocol Section.

The tour of duty of a fishery representative is 4 years, but can be extended or shortened, depending on the circumstances. When they return to Russia, the representatives and attaches are again absorbed into the Committee on Fisheries, or some of its regional administrations.

VI. BILATERALS & JOINT VENTURES

After the breakup of the USSR, the Committee on Fisheries of the Russian Federation assumed the rights and responsibilities of the former Soviet Union for 40 of the existing 59 bilateral intergovernmental agreements and for 11 of the 14 international organizations to which the former USSR belonged. Russia is also keeping open 30 of the 32 fishery representations around the world.[45]

Former Russian fishery collectives (kolkhozes), as well as large companies looking abroad for business opportunities, have been making deals and establishing joint ventures with foreign companies to make up for the dwindling fishery resources at home, to gain access to foreign grounds and port facilities, to receive capital, fuel and other supplies, and to earn foreign currencies. The Russian kolkhoz leadership tends to lack commercial experience, and their foreign ventures often meet with failure.

A. LATIN AMERICA

Argentina: In 1986, Argentina signed a fisheries framework agreement with the Soviet Union, which remained in force until May 1993. The agreement granted the Soviets the right to fish the Argentine EEZ south of the 46th parallel where they were allowed to harvest any commercial species except hake. In the early years of the agreement, the Soviets were limited to 18 vessels and 180,000 t per year, and the Argentine Government was paid 3 percent of the value of the fish exported. In 1990, the limits decreased to 15 vessels and 150,000 t, and the fee was raised to 12 percent of the value of fish landed. In 1991, the Soviet allocation dropped further to 10 vessels and 100,000 t; and in 1992, it decreased to 5 vessels and 50,000 tons.[46]

The Soviets first entered the southwestern Atlantic in 1961, deploying research vessels to assess stocks on the virtually untouched Patagonian Shelf. Based on favorable reports from these research cruises, the Soviets decided to deploy a substantial commercial fleet. Soviet vessels first appeared in significant numbers off Argentina during 1966. In their first year of fishing in the area, the Soviet fleet caught 73,000 t of fish.

This amount was equal to one third of the entire 1966 Argentine catch. The Argentine Government, concerned that the large Soviet hake catch would decrease the yields of Argentine fishermen, declared a 200-mile Territorial Sea in 1967 and required foreign fishermen to purchase licenses. Argentine authorities initially implemented licensing regulations that required foreign vessel owners to pay only a nominal licensing fee. Soviet fishermen in 1967 paid the nominal fee ($30) despite the orders of the Soviet Government not to do so. Soviet catches in 1967 reached 677,000 t, three times that of the Argentine catch. In response to this massive Soviet fishing effort, the Argentine Government increased licensing fees to $10 per net registered ton. Processing vessels had to pay $20 per net registered ton. The Soviets refused to purchase fishing permits at these substantially increased rates and withdrew their vessels on April 1, 1968. The Argentine Government reported a number of enforcement problems during the next few years, but Soviet catches fell sharply. The Argentine Navy seized, and at times fired upon, Soviet vessels. The Soviet catch in the southwestern Atlantic continued at low levels (less than 30,000 t) during the 1970s and early 1980s. The Soviets began expanding fishing operations in the southwestern Atlantic again after the 1982 Falklands conflict, increasing their catch from only 19,000 t in 1982 to 77,000 t in 1989. Almost the entire catch until 1986 was off the Falklands, or outside the Argentine 200-mile zone.[47] The principal species taken were southern blue whiting, squid, and grenadiers (other than blue grenadiers), depending on the year, but smaller catches of hake, Patagonian toothfish, and other species were also reported. In 1986, the Soviets responded favorably to the Argentine proposal for a bilateral fisheries access agreement that allowed Soviet fishermen to catch 180,000 t of fish per year off the Patagonian coast, south of 46° South.[48] The agreement precluded the Soviets from catching hake or shellfish, the two species which the Argentine fishing fleet targets heavily, and required them to purchase semi-processed Argentine fishery products.[49] Beginning in 1987, the Soviets deployed vessels in Argentine waters under the new agreement. The Soviet 1987 catch in Argentine waters was 189,000 tons. Unlike most other distant-water countries, the Soviets did not apply for British/Falkland Island Government licenses to fish off the Falklands. The catch of the former Soviet Union and successor states in the southwestern Atlantic has remained at over 200,000 t through 1991 (see Volume IV, Latin America, appendix C4d1). The shift from the Falklands to the Argentine EEZ does not seem to have significantly affected the species taken by the Soviets who continued to take primarily squid, southern blue whiting, and grenadiers. The Soviets have reported much larger squid catches than they ever achieved in their fishery off the Falklands, taking off Argentina a record 134,000 t in 1991. The only important difference in the Soviet catch was a larger catch of blue grenadiers, a species they never harvested in significant quantities off the Falklands. The Soviet-Argentine 1986 agreement expired in May 1993 and has not been renewed by the successor states.[50]

At least three joint ventures between Argentine and Soviet companies have continued operations since the breakup of the USSR.[51] In addition, in 1992, Russia and Argentina signed a letter of intent to create three new joint ventures with the purpose of exploiting krill in the South Atlantic.

In October 1992, a Russian-Argentine joint venture agreement was signed in

Production Association) and the Governor of the Tierra del Fuego Province. The agreement envisions a joint fishing expedition to take place in the Argentine waters of the South Atlantic.[51]

In accordance with this agreement, in early 1993, an expedition of six trawlers and one mothership from DALMOREPRODUKT arrived in the coastal waters of Argentina to catch crabs, squid, and herring. Reportedly, they caught about 10-18 metric tons of squid a day.[52]

Brazil: Soviet fishermen have not conducted extensive operations off Brazil. There were some limited contacts during the 1960s before Brazil declared a 200-mile zone, but Soviet fishermen have not since operated in Brazilian waters. Press reports have described occasional efforts by the Soviets to negotiate fishery cooperation and joint venture agreements. Although some negotiations were held, the authors know of no finalized agreements.[53]

In 1987, SOVRYBFLOT negotiated a joint venture with a Brazilian company to establish a joint venture, Brasovpesca. No actual contracts, however, were signed, partially because the Brazilian Navy objected.[54] Another Russian company reportedly formed a joint fishery venture in 1992 with Brazilian and Portuguese companies, but no details are available.[55]

Chile: The southeastern Pacific off Chile and Peru was one of the principal Soviet distant-water fishing grounds.[56] Chile has never, however, permitted Soviet-flag vessels to operate in Chilean waters. The leftist-oriented Allende Government did permit one Soviet fishery research vessel, the *Akademik Knipovich*, to operate under Chilean flag off southern Chile during 1972-73.[57] All such cooperative programs, including fishery projects, were abruptly terminated when the Allende Government was overthrown in 1973 by right-wing, anti-communist military officers.[58]

The election of a new democratic Chilean Government in 1989 has made possible renewed fisheries cooperation. Soviet trade officials visited Chile in September 1990 seeking permission to operate five vessels under the Chilean flag, offering half of the catch to the Chileans.[59] The discussions led to the signing of contracts with two Chilean companies and a framework agreement for fisheries cooperation with a Government-owned corporation promoting economic development, PROCHILE.

In 1992, Russia and Chile signed a fishery cooperation agreement, but the agreement did not include access to Chilean fishing grounds.[60]

By 1992, Soviet and Russian fishermen ceased operations in the southeastern Pacific fishery, reportedly because of the exorbitant fuel costs involved.

Two Chilean companies (Compañia de Inversiones y Comercio and Servicios Portuarios) signed a joint venture agreement in 1990 with the Soviet Fisheries Research Institute (VNIRO)[61] to catch and market krill. The Russian Federation Government has probably assumed responsibility for this agreement.

Colombia: The Soviet Union began pursuing joint venture agreements with Colombia during the early 1980s. The first Soviet-Colombian joint venture was formed in 1981 to develop Colombia's tuna fishery using

several Soviet-built 720-GRT seiner-trawlers. It is not clear whether the joint venture was successful. Unconfirmed reports suggest that the Soviets had little success with the seiners they deployed. In 1986, the Soviets reportedly expressed an interest in establishing further joint ventures with Colombian companies, but details are not available.

In 1993, the Colombian company, Frigomarina, Ltda., is leasing four Russian vessels. They are the *Shilale* and *Ramigala* which are LAUKUVA-class (359 GRT) trawlers and the *Mureks* and *Marginella* which are TIBIYA-class (597 GRT) tuna clippers.[63]

Cuba: The Russian Federation still maintains close contacts with the Cuban Fisheries Ministry (MIPES), but not as extensively as did the former Soviet Union. The Cubans are primarily concerned with the sharp cuts in diesel fuel supplies, but the Russian Federation places much less importance on its Cuban relationship than did the former Soviet Union and is unwilling to continue the massive Soviet subsidies. The Russian Committee on Fisheries, however, continues to maintain a fisheries attache office in Havana.[64]

Falkland Islands: In 1992, the Russian Government continued the Soviet Falklands policy and did not apply for Falklands fishing licenses. In 1993, several Russian companies made inquiries to Falkland Island officials about applying for Falkland Islands Government (FIG) licenses in the future. In addition, the fact that the Soviet-Argentine bilateral fisheries agreement expired in 1993 and was not renewed by the Russian Federation suggests that Russia may decide to deviate from the Soviet policy and obtain FIG licenses.[65]

Panama: Russian companies have reportedly registered many merchant and fishing vessels under the Panamanian flag. These registrations appear to have been carried out by various groups with little or no regulation because of the ill-defined status of the former Soviet state fishing companies.[66] Russian officials complain that many vessels have been transferred to foreign flag registry without following procedures established under Russian law.[67] It is possible that some Russian officials who have transferred Government-owned vessels to countries like Panama, now have a personal equity interest in the vessels. Notably, the Russians have recently transferred 10 refrigerated fish transports to the Panamanian flag. This appears to have been a well-thought-out commercial venture as the vessels are some of the most modern fish transports in the Russian fishing fleet; two were built as recently as 1991-92. It is unclear if these vessels are being operated as a Panamanian-Russian joint venture, or if the vessels have been registered in Panama while still primarily servicing the Russian distant-water fleet. The authors have noted reports of Taiwan vessels transshipping their catch in the southern Atlantic to Panamanian-flag refrigerated transports;[68] some of these transport vessels may be reflagged Russian fish carriers.

Peru: The USSR and Peru signed two bilateral fishery agreements on December 6, 1988: a bilateral protocol and a joint venture contract under that protocol. The two documents gave Soviet fishing vessels access to Peruvian fishery stocks for the first time since 1986 when the first Soviet-Peruvian joint fishery venture expired. The Peruvian Government canceled the Soviet-Peruvian

joint venture (between the Soviet Northern Fisheries Administration, SEVRYBA, and the Peruvian state-owned fisheries marketing company, EPSEP) in 1991, and forced the Soviets out of Peruvian coastal waters. However, unconfirmed reports suggest that at least some Russian fishing continued off Peru as late as December 1992.[69] Current information on Russian-Peruvian bilateral fishery relations is not available.

B. ASIA AND OCEANIA

Australia: A Russian-Australian joint venture (J/V), Holding Industry, has been established in Sydney between the Nakhodka Fishing Fleet Base and unknown Australian interests. The goal of the J/V is to process Australian, and later possibly New Zealand, fishery resources for export. The Russian side will provide vessels and crews for fishing operations, while the Australian side will provide access to the Australian EEZ, as well as fuel, foodstuffs and other supplies for the Russian fishermen. One Nakhodka trawler, *Argonit*, began operations in the Australian EEZ which is reportedly the first fishing ever conducted by either the Russians or the Soviets in the Australian zone.[70]

In early May 1993, the Director General of DALRYBA, the Far Eastern Fisheries Company, Yuriy I. Moskaltsov, visited Australia to negotiate a joint venture named Australia-Vostok, Ltd. The Russians are proposing to use the information which they have collected on the fishery stocks in the Australian 200-mile zone in exchange for access to these stocks for a limited number of Russian vessels. Several other projects have also been proposed, including one to modernize a DALRYBA stern factory trawler in an Australian shipyard; the vessel would then fish for Pacific pilchard and saury, can the fish, and deliver it to Australian markets. After offloading the canned fish, the vessel would accept a delivery of frozen meat and can it on the return trip to Vladivostok where it would be sold on the Russian market.[71]

Two new Australian joint ventures in Primorskii Krai are also engaged in fishing-related operations: Kvintod Flai Co., Ltd. is involved in fishing and fish processing, as well as timber processing; and Paulus, which is partnered with DALRYBA, will catch and process fish and squid. Details on the activities of these two ventures are currently unavailable.[72]

Another Russian-Australian J/V, between the fishing collective LENINETS from the Khabarovsk Region and the Australian company "Emerald Fishers," concluded a contract to modernize 4 LENINETS vessels in the Singapore shipyard ATLANTIS. When the J/V went bankrupt, three vessels were sequestered at the shipyard, while the fourth one disappeared. It was eventually caught by INTERPOL in Australia -- repainted, carrying false documents, and flying a Honduran flag.[73]

China: The former Soviet Union and the People's Republic of China signed a bilateral fisheries agreement in 1988 which established cooperation between the Soviet Far Eastern Fisheries Administration and the China National Fisheries Corporation. Technical exchanges have taken place in the fields of harvesting, aquaculture (particularly of seaweed), processing, and fishing vessel repair.[74]

At the most recent meeting of the joint Russian-Chinese Commission on Fishing held in Moscow in December 1992, an agreement was reached on the construction of a scientific

research center for seafood products in Russia. The project will be operated by the Russian company PRIMAKVAPROM, from Vladivostok, and an unnamed Chinese fish-processing company. The main objective of the center will be to promote harvests of seaweed, king crab, scallops, oysters, sea cucumbers, and other underexploited species through modern scientific research. A Chinese company will design and construct the center. In compensation, China will receive a 1,000 t fish catch allocation in 1993 and 1994 of an unknown species. Construction is scheduled to begin in 1994.[75]

Indonesia: The Khabarovsk Region kolkhoz, PAMIAT LENINA, leased two seiners to the Russo-Indonesian J/V VLADSINMETHOD, LTD. for 100 days of shrimp and lobster fishing in the Indonesian economic zone. The contract, however, was apparently invalid and the vessels were seized in July 1992 by the Indonesian Coast Guard for illegal fishing. In February 1993, the vessels were still being held in the Indonesian port Merauke, while the 33 Khabarovsk fishermen were finally released in January and flown back to Russia.[76]

Japan: Japanese and Soviet/Russian fishermen fish in each other's zone under an annual bilateral fisheries agreement. Under the 1993 Agreement, non-fee quotas were set for both countries at 171,000 t, an 11,000 t decrease from 1992. An additional 18,000 t (down 12,000 t from 1992) was allocated to Japan for a $5.9 million cooperation fee, the same as in 1992. Japanese negotiators reportedly requested that 1993 allocations remain the same as in 1992, but Russia was determined to significantly decrease Japanese allocations because of allegedly depleted Alaska pollock, cod, and flatfish stocks in the northwestern Pacific.[77]

With the dissolution of the former Soviet Union, the number of Russia (former Soviet Union)-Japan joint fishery ventures doubled from 7 in 1989 to 14 in 1991. They involve a wide range of activities, from herring roe processing to crab pot fishing. Other joint ventures in Russian waters include joint fishing operations for Pacific cod and hair crab, purchases of Alaska pollock at sea from Russian fishing vessels, and joint seaweed and sea urchin harvesting off Kaigarajima Island off Hokkaido. The purchase of Alaska pollock at sea from Russian vessels has provided a significant supply for the Japanese market, annually ranging between 5,000 to 70,000 tons since 1987.

The largest of these joint ventures, Pilenga Godo, involves several Japanese firms which are assisting Russian companies in salmon hatchery development. In July 1993, the Russian-Japanese joint venture, Pilenga Godo, will begin the construction of its fifth Kamchatka hatchery, called Ketkino. The hatchery is expected to be fully operational by the end of 1993.[78]

Day-to-day bilateral fishery matters are handled by a three-man Office of the Fisheries Attache in Tokyo.

New Zealand: The Nakhodka High-seas Fishing Company (BAMR) and the New Zealand company, Geo-Scales, established a joint venture company called "BAMR-Scales Pacific" in New Zealand. The Russians have contributed 50 percent of the capital investment with the ATLANTIK-class stern factory trawler, the *Poet*, which will fish for pautassou off New Zealand in the southern part of the Pacific Ocean. The J/V will also assist Nakhodka fishermen in finding other joint venture partners, offer shiphandler services, supply and repair Russian vessels in

New Zealand, and obtain logistical support for its operations in the nearby fishing grounds of Australia and Oceania.[79]

North Korea (Democratic Peoples Republic of Korea, or DPRK): In November 1992, during the sixth meeting of the DPRK-Russian Joint Committee on Cooperation in Fisheries in Pyongyang, a bilateral fisheries cooperation agreement was signed between the Director of the DPRK General Bureau for Pelagic Fisheries of the State Fisheries Commission, Han Yong-on, and the Director of the Far Eastern Fisheries Administration (DALRYBA) of the Russian Committee on Fisheries, Yuriy I. Moskaltsov.[80] The details of this agreement are not known.

In July 1989, a joint venture was reportedly established between an unnamed fishery collective (kolkhoz) in Primorskii Krai and an unspecified North Korean company to harvest and market sea urchin.[81]

In 1990, the Soviets became irritated by the fact that North Korean vessels not only fished illegally in areas of the Sea of Okhotsk and off Kamchatka, but also sold a part of their catch quota, mostly Alaska pollock, to Japanese vessels and even allowed them to fly the North Korean flag to harvest the fish. In May 1990, Soviet enforcement patrols reportedly seized 12 Japanese vessels disguised as North Korean vessels. The Soviets fined and confiscated the vessels and arrested the crews.[82]

In February 1991, a South Korean source alleged that at the bilateral fishery talks, the Soviets refused to allocate any quota to the North Koreans, but would allow them to catch 30,000 t of Alaska pollock for a fee. The North Koreans, however, were allowed to sell their quota to other parties (presumably the Japanese) and, in addition, were allocated 30,000 t of sardines so that the Korean vessels could remain deployed in Soviet waters and their fishermen employed.[83] It is impossible to verify this information and it is reported here as *relata refero*.

In 1992, Russia officially decreased the North Korean fishing quota in the Russian Northwest Pacific fishery to only 60,000 t of fish, a major drop from the 200,000 t that the Koreans previously received.[84]

In February 1993, the fishing association DALMOREPRODUKT of Vladivostok established a joint venture with the small North Korean town of Simpho. DALMOREPRODUKT will provide raw fish and cans to a fish-processing factory in Simpho (which was earlier modernized with Russian equipment) and the finished product will be sold to "Sadko", a Russian-French J/V which will market it in Western Europe.[85]

Republic of Korea (South Korea, or ROK): In February 1992, representatives from the ROK and Russia signed a bilateral agreement in Seoul regulating fishing in the Sea of Okhotsk. In exchange for 30,000 metric tons of squid, pollock, and saury caught in Russian waters, Korea will supply Russia with the same quantity of mackerel, scad, and sardines, or it will provide Russian vessels with supplies and technical support.[86]

The ROK and the Russian Federation signed another bilateral fisheries agreement in September 1992. Under this agreement, each side is granted access to the other's waters; joint ventures are encouraged in fishing, processing, and aquaculture. Joint resource assessment research is also being planned. In particular, Russian officials hope for ROK investment in onshore processing and cold

storage plants in exchange for granting ROK vessels access to fisheries in Russian waters.

The ROK North Pacific trawler fleet received Alaska pollock allocations within the Russian EEZ in 1992 and 1993, but has so far managed only a negligible pollock catch in Russian waters. ROK vessels were given Alaska pollock allocations in the waters of the disputed Northern Territories in 1992 which prompted the Japanese Government to urge the ROK to respect the Japanese claim to the territories, and thus the ROK actually caught very little Alaska pollock in Russian waters in 1992. In 1993, the ROK was given an allocation in the Russian EEZ of 150,000 t, but the inability of the two sides to reach quick agreement on fees has resulted in limited ROK fishing within Russian waters.

ROK fishing companies first formed joint ventures with former Soviet organizations in 1989 allowing them over-the-side purchases in Russian waters of Russian-caught fish. By 1991, as many as 12 ROK companies with 23 vessels were participating in these joint ventures. The Korean captains purchased an estimated 90,000 t of Alaska pollock, up one-half from the 61,000 t purchased in 1990. A total of 25 ROK vessel owners were expected to purchase 110,000 t of Russian fish through these arrangements in 1992.[87] Final annual results, however, are not available.

The giant ROK multinational corporation Samsung has signed a 3-year contract (August 1991-July 1994) to purchase Russia-origin Alaska pollock from the SOVRYBFLOT company. Samsung plans to process the Alaska pollock in China and Thailand where labor is inexpensive and sell the product in the United States. Samsung will pay SOVRYBFLOT $6 million per year for 8,000 t of Alaska pollock, or about $760/ton.[88]

Cooperation between the ROK and Russia is also taking place in fisheries science and technology. At a conference held in April 1992, Russia agreed to provide krill processing expertise in exchange for ROK salmon hatchery technology.

Russian and ROK officials reached agreement on several additional fishery cooperation projects during meetings held in Seoul in March 1993. Joint projects include surveys of the Alaska pollock resource in the "peanut hole"; an assessment of cuttlefish resources in the waters of the two countries, research and tests of trawling gear, and the exchange of marine fishery science information and scientists.[89]

The ROK fishing industry badly needs access to Russian waters, especially as an alternative for ROK vessels that lost access to U.S. and "donut hole" waters. Future expansion of this relationship, however, is being threatened by the reportedly unreasonable price demands and contract terms demanded by Russian joint venture partners. Russia's determination to close the "peanut hole" to foreign fishing has also deterred cooperation.

In early 1993, a new Russian-ROK joint venture, "PreHan Enterprises Company," was established between the Preobrazhenie[90] Trawling Fleet and an unknown Korean company. The J/V is already engaging in fishing operations in the Russian EEZ using the quota allocations of the Russian partner. The Korean company provided the necessary supplies and provisions for the J/V fishermen, the fuel tankering and transshipment of production, and the selling of landed fish and fishery products on foreign markets.[91]

In September 1993, a new joint venture called "SOFKO" was registered in the city of Nakhodka in the Russian Far East. The venture partners are the Russian kolkhoz *Tikhii Okean* (Pacific Ocean), and the South Korean companies Samsung and Oyang Fisheries. The main goals of the J/V will be the processing and selling of fishery products, vessel repair and construction, and the development of Nakhodka's infrastructure.[92] The Koreans are taking advantage of Nakhodka's status as a Free Economic Zone (FEZ) within the Russian Federation which means that the J/V is exempt from certain taxes, among other privileges.

Taiwan: The former Soviet Union had few, if any, contacts with Taiwan for 40 years. Yeltsin reiterated Russia's official view of Taiwan on September 15, 1992, emphasizing that Taiwan is an inalienable part of China and that the Russian Federation does not maintain official inter-state relations with Taiwan. Economic, scientific, and other unofficial ties between Russia and Taiwan are carried out by individual citizens and non-governmental organizations.[93] Russia, however, has been downplaying the significance of the current joint ventures to avoid protests by the People's Republic of China.

The Russian Pacific Scientific Institute of Fisheries and Oceanography (TINRO) and the Taiwanese June Long Fisheries company signed an agreement to mount an expedition to study squid and fishery stocks in the South Kuril island area starting in late July 1992. The joint expedition stemmed from the August 1991 bilateral fishery talks between Russia and Taiwan at which both sides agreed to cooperate in squid, cod, and saury harvesting, processing, and research. The signed agreement also allows Taiwanese fishing companies access to Russian waters against the payment of a fee and it provides for access to Taiwanese ports for maintenance and repairs of Russian fishery vessels.

The Overseas Fisheries Development Council signed a memorandum of understanding with the SOVRYBFLOT organization in August 1991 allowing Taiwan vessels to fish in the waters off Sakhalin Island and the Kamchatka Peninsula. The catch in the former Soviet zone, however, was not very profitable and so the venture was not renewed when it expired on November 15, 1992. There are no indications that Taiwan will seek future access to the Russian EEZ in the near future.[94]

Thailand: A new joint venture was reportedly established in Sakhalin between an unknown Thai fishing company and a local Russian company to jointly process fishery products.[95]

C. EUROPE

Bulgaria: The former Soviet Union concluded three bilateral agreements with Bulgaria. (For full details see the Bulgaria chapter.) These agreements were likely more beneficial to Bulgaria than to the USSR as the Soviets had more to offer in terms of equipment and expertise, but they also served a political purpose.

The Russian Federation, the successor state to the USSR, is currently renegotiating the 1978 Ocean Fishing Agreement concluded between the USSR and Bulgaria. The final draft of the agreement has not yet been completed as of this writing.[96]

In June 1990, a Soviet-Bulgarian joint venture, SOZOPOL-Kamchatka, was created in the Russian Far Eastern city of

Petropavlovsk-Kamchatka. The founders of the J/V were the Bulgarian state fishing company RIBNO STOPANSTVO (its successor in the venture is OKEANSKI RIBOLOV), and the Russian fisheries company KAMCHATRYBPROM. The J/V leases the Bulgarian trawler *Feniks* to process fish delivered by Kamchatkan fishermen.[97] In May 1993, the vessel was undergoing maintenance and minor repairs in the shipyard docks of Petropavlovsk-Kamchatskii.[98] It is rumored that the Bulgarians plan to sell the vessel to a Kamchatka company for hard currency.

Cyprus: In the last 2 years, Russia reflagged to Cyprus 9 Norwegian-built large stern factory trawlers (NEVELSK-class, 1,899 GRT) all of which were built in 1990 and 1991, and 1 East German-built refrigerated cargo vessel (KARL LIBKNEKHT class, 11,755 GRT) built in 1990. The U.S. Navy lists the KARL LIBKNEKHT and at least 2 of the NEVELSKs as still owned by Russia.

Denmark: The City Council of St. Petersburg has recently requested the help of the Danish Government in maintaining the city orphanages. The Danes responded by donating canned herring which is trucked directly to the City Council (under guard). These goods are then sold and the proceeds assigned to the budget for the orphans.

Faroe Islands: Russia recently concluded a bilateral fisheries access agreement with the Faroe Islands giving Russian fishermen a 1993 catch quota of 140,000 t of blue whiting in the Faroese 200-mile zone. In exchange, the Faroese fishermen received 1993 catch quotas of 30,000 t of various species they could catch in Russian waters.[99]

Greenland: Greenland suspended plans for a bilateral fisheries agreement with the Soviet Union on January 13, 1991, following the aggressive actions of the Soviet military in Lithuania.

After the disintegration of the Soviet Union in December 1991, however, Greenland renewed talks with Russia in Copenhagen. An agreement was signed by Russia, Greenland, and Denmark on February 24, 1992. The agreement provides for joint fishing in Greenland's and the Barents Sea's fishing zones with a 1992 catch allocation of about 40,000 metric tons. These allocations were divided up as follows: the Greenlanders have obtained an 8,500 metric tons (t) catch quota in the Barents Sea (mostly cod, haddock, plaice, and 3,000 t of shrimp). In return, the Russian fishermen have obtained 31,400 t of fish in Greenland's (Danish) 200-mile zone. The most important species allocated to the Russians were: blue whiting (10,000 t), ocean perch (9,000 t), and Greenland halibut (6,000 t). In addition, the Russians have committed themselves to sell Greenland in 1992 at least 4,000 t of cod, which would be helpful to the Greenland fish processing industry; several fish processing plants have experienced severe shortages of cod deliveries.[100]

Norway: In March 1992, Norway and Russia signed an umbrella agreement in Oslo regarding bilateral cooperation in fisheries, research, and environmental protection. The two sides agreed to cooperate in the preservation and rational use of marine life in the Barents Sea, in the prevention of oil pollution in the Barents Sea, and in promptly notifying the other of nuclear accidents. The two sides also agreed to cooperate in polar research of the Arctic and to open a Russian Federation Consulate General in Tromsø and

Norwegian General Consulates in St. Petersburg and Murmansk. Under this umbrella agreement, the leaders of Norway's Finnmark Province and of the Arkhangelsk Region met in Arkhangelsk in June 1992. They agreed to create joint ventures in salmon farms, hatcheries, and feed production, as well as in fishery processing plants. [101]

During a visit of Russian Foreign Minister Andrei KOZYREV to Norway in 1991, it was agreed to renew discussions concerning the demarcation of the maritime boundary, the economic zones and the continental shelf in the Barents Sea. In 1926, the former USSR unilaterally established a boundary in the Barents Sea which Norway never recognized. Negotiations between Russia and Norway on this problem have been ongoing for two decades, but only in early 1993 was a preliminary agreement reached on the boundary in the "northern part" (probably the area around the Svalbard Islands) of the Barents Sea. Further discussion will center on a relatively small, but economically vital area in the Barents Sea.[102]

In February 1993, the major issue discussed by the Foreign Ministers of Norway and the Russian Federation in respect to the Barents Sea was the problem of overfishing. The Ministers agreed to try to preserve fishery stocks in the Barents Sea by increasing controls on fishing activity by both sides.[103]

The aquaculture section of the Murmansk Fisheries Administration and Norway's Polar Industries Association have agreed to establish a 50/50 joint venture called Kolnor Association. The joint venture will culture cod taken at sea by Russian trawlers. Six sites in northern Norway and in the Murmansk region of northern Russia have been selected for the construction of sea pens, round cages with a 40-meter diameter and a capacity of 12,000 cubic meters. The first pens will be built in Kongfjord, Norway, where a good infrastructure, transportation links, processing plants, well-trained workers, and good harbor facilities exist.[104]

Romania: In February 1978, Romania and the Soviet Union signed in Bucharest a bilateral fisheries cooperation agreement (see appendix 8 in Romania chapter of this volume). The 5-year agreement[105] established a Joint Commission to meet at least once each year alternately in Bucharest and Moscow. The Commission would coordinate the exchange of fishery experts and the results of exploratory and other fishery research; it would also organize technical conferences, etc. One of its most important provisions was the coordination of Romanian and Soviet high-seas fisheries in various world oceans.[106] Whether this agreement was continued by the Russian Federation is not known.

D. AFRICA & MIDDLE EAST

The Gambia: The fishery relations between the Russian Federation (or former Soviet Union) and the Gambian Government are not fully known. According to a June 1993 report by the U.S. Embassy in Banjul, 4 Kaliningrad fishing vessels have been issued licenses to fish within the Gambian EEZ. Since the Gambian Government currently lacks fisheries enforcement capabilities, it cannot be excluded that additional Russian vessels are fishing in that country's EEZ.

Morocco: The former Soviet Union concluded a fisheries agreement with the Government of Morocco in 1991 and obtained a large annual catch quota (850,000 tons) in the Moroccan 200-mile zone. The Russian

Federation renegotiated the former Soviet accord in early 1992 and managed to conclude a draft agreement allowing its fishermen to net 400,000 t of sardines and mackerel each year for the next three years.[107]

On August 28, 1992, Russia and Morocco signed a bilateral fisheries cooperation agreement allowing the Russian fleets to fish off southern Morocco. The three-year accord replaced an earlier agreement that was concluded with the Soviet Union. The new agreement requires Russian vessels to respect several conditions set by the Moroccan Government to regulate Russian fishing and ensure financial compensation to Morocco. In addition, under the terms of the agreement, the two countries must observe a moratorium on fishing for 2 months each year to allow the stocks to reproduce.[108]

Namibia: The Soviet fleets have been fishing off Southwest Africa (as Namibia was called before its independence) since the 1960s. Immediately prior to 1990, when the fisheries off Namibia were still controlled by the Republic of South Africa under the UN Trusteeship, the USSR's was one of the largest fleets fishing for hake and horse mackerel.[109] After Namibia declared a moratorium on all foreign fishing within its 200-mile zone in 1991, foreign vessel owners began to form joint ventures with Namibian companies to whom the Namibian Government granted the catch quotas. The Namibian concessionaires effectively sell their quotas to foreign vessel owners by chartering their vessels. Joint ventures between foreign fishing companies and local entrepreneurs are also common. This increasingly complex structure of interlocking front companies makes ultimate vessel ownership difficult to identify.[110]

Nigeria: The Nigerian Government has had no negotiations on access fisheries with the Russian Federation, reports the U.S. Embassy in Lagos.[111]

Yemen: With the reunification of Yemen, the new Republic of Yemen is disposing of the state-owned fishing industry of the former People's Democratic Republic of Yemen. This includes the joint Yemeni-Soviet fishing company which will be disbanded. The Soviet Union contributed $140 million in aid, which was spent on developing a large-scale, state-owned fishery with 35 Soviet-built trawlers and seiners, several cold storage plants, modernization of the Aden fishing port, and two canneries. The Soviet-made vessels are now too costly to maintain and operate, and with the breakup of the Soviet Union, it is difficult to get spare parts. Only two of the vessels are reportedly worth operating; the others will be either sold or scrapped.[112]

E. NORTH AMERICA

United States: The United States and the Russian Federation cooperate on fishery matters through their Agreement on Mutual Fisheries Relations that entered into force on October 28, 1988. The current Agreement, which expired on October 28, 1993, provided fishermen reciprocal access to the 200-mile zones of each country and served as a forum within which to discuss issues of mutual concern. Steps to extend the agreement are being taken by both sides.

Several issues of great concern to fishery interests of the two countries are being discussed intensively under the Agreement on Mutual Fisheries Relations. One is the conservation of salmonids in the North Pacific. The other is the management of

North Pacific fishery resources. The two sides established a bilateral "Bering Sea Fisheries Advisory Body" that has assessed the status and trends of pollock resources, including those involved in the unregulated pollock fisheries by third parties in the Central Bering Sea (the so-called "donut hole" area). This action has fed into a continuing political initiative to develop an appropriate management regime for the donut hole.

Large Soviet direct fishing activities in the U.S. EEZ, which were curtailed by President Carter in January 1980 (following the Soviet invasion of Afghanistan in December 1979), were not resumed in the 1980s. Soviet fishermen landed only 6,649 t (against an allocation of 12,708 t) of Atlantic mackerel in 1989. No direct allocations in the Atlantic have been given to Soviet/Russian fishermen since 1989. The Soviets had no direct catch allocations in the Pacific after 1987.

U.S. companies concluded, during the last three decades, several joint fishery ventures with Russian companies.

Day-to-day bilateral fishery matters are handled by a the Office of the Fisheries Attache of the Russian Federation in Washington, D.C. which is attached to the Russian Embassy.

Canada: Time constraints did not permit the necessary research to describe the extensive and traditionally good relations between the former Soviet Union/Russian Federation and Canada.

VII. OUTLOOK

Russia is experiencing a transitional period of economic and political development which has heavily impacted the fishing industry.

Economic reforms which were stalled in Russia have recently received a boost by favorable political developments. In the future, more privatization can be expected. The government will discontinue supporting unprofitable companies because of limited budget funds. Planned output which used to be the alpha and omega of the Soviet economy (often without much regard for consumers) will no longer be of any use. The objective now is to cover operating costs to survive and maximize profits in order to modernize existing equipment and buy new vessels, gear, processing plants, and other materials.

In the next few years, it is likely that Russia will limit somewhat its far-flung, world-wide operations. Access to fishery resources of coastal countries will become more and more problematic as these countries develop their own fishing industries. Russian fishermen have, in the last 10-15 years, lost important fishing grounds off Canada and the United States (which are now exploited almost exclusively by native fishermen), off Namibia (where the newly independent country enforced a moratorium on foreign fishing), in the international waters of the Bering Sea (where overfishing led to an international moratorium on the Alaska pollock fishery for 1993 and 1994), and elsewhere.

In addition, the licensing fees, demanded by coastal countries after the access is

negotiated, are increasing rapidly and are especially burdensome on the hard-currency-strapped countries of the former Soviet Union. Some of the past fishing practices of Soviet fishermen have generated considerable ill-will, especially in African countries. They are equally wary when negotiating with the successor states to the USSR.

Of the greatest importance will be the fisheries research inside the Russian 200-mile zone which was neglected in the past. It is this zone with its abundant resources that will become the backbone of the Russian fishery landings and solid research is needed to insure its viability and continued maximum sustainable yield.

Russian exporters will have to carefully cultivate foreign markets. In the past, only the most valuable commodities were exported: caviar, salmon, and crab products. Recent privatization and the loosening of central control has generated a veritable exodus of all kinds of fishery products. Individual vessels owners have been dumping their catch abroad at low prices to obtain hard currency. These practices have caused an international outcry and led to blockades at fishing ports and the destruction of imported commodities in Western Europe and even in Poland where local angry fishermen prevented Russian trawlers from selling their cod at one quarter of the local price.

Russia's distant-water fleet, the largest in the world in terms of gross tonnage, will have to reduce the number of vessels considerably to cope with the limited access to suitable fishery stocks. Russia will probably continue buying fishery vessels abroad, provided the hard currency is available. In the past, during the Soviet era, hundreds of vessels were built in East Germany and Poland, but in the last 2-3 years, new additions to the high-seas fleet have come mostly from West European shipyards in Spain and Norway. These are state-of-the-art vessels with the modern equipment and fishing gear.

Despite many negatives, Russia's fishing industry has a major advantage: large and prolific fishery resources in its Pacific and Barents Sea bodies of water. Endowed with skilled fishermen and adopting free market methodologies, its future looks bright despite current transitional difficulties.

SOURCES

FAO. *Yearbook of Fishery Statistics: Catches and Landings;* Rome, various years.

GLOBEFISH. "The Fishery Industry during the Transition of the Former USSR to CIS," *FAO/GLOBEFISH Research Programme*. Vol. 24. Rome: FAO, 1993.

Kravanja, Milan. "Soviet and Cuban Fisheries in the Caribbean." Published in: *Soviet Seapower in the Caribbean; Political and Strategic Implications*, pp. 135-163. James D. Theberge, Ed., Praeger, New York, 1972. (In cooperation with the Center for Strategic and International Studies, Georgetown University.)

Kravanja, Milan. "The Soviet Fishing Industry: A Review". Published in: *Soviet Oceans Development*. Prepared for the U.S. Senate Committee on Commerce, 94th Congress, 2nd Session: pp.377-462. GPO, Washington, D.C., October 1976.

Lloyd's Register of Shipping. *Lloyd's Register of Shipping Statistical Tables*. London, various years.

Lloyd's Register of Shipping. *World Fleet Statistics at 31 December 1992*. London, 1993.

U.S. Navy, Office of Naval Intelligence, July 1993.

ENDNOTES

1. In 1990, the gross value of the Russian fisheries output was estimated by GLOBEFISH at 13.4 billion rubles, or over US$ 8.1 billion (at the then exchange rate of US$ 1.00 = R 1.65). Since the preparation of this report "began before the transformation of the former USSR into 15 independent states," it is not clear whether this estimate refers to the Soviet Union, or the Russian Federation. The figure is nevertheless valuable since such figures were hard to obtain in the over-secretive USSR.

2. The poor results in fisheries cost the then-Commissar of Fisheries, Zhemchugina, not only her job, but also her freedom. She was arrested and interned in the Siberian GULAG despite the fact that she was the wife of Vyacheslav Molotov, Stalin's foreign minister. She died in Moscow in 1991.

3. The acronym BMRT derives from the Russian name for these vessels: Bolshoi Morozylniy Rybolovnyi Trauler (large freezer fishing trawler).

4. Kravanja, Milan. "The Soviet Fishing Industry: A Review". Published in: Soviet Oceans Development. Prepared for the U.S. Senate Committee on Commerce, 94th Congress, 2nd Session: pp.377-462. GPO, Washington, D.C., October 1976.

5. Appendix 4 includes 100 classes of vessels having over 500 GRT which are believed to be engaged in high-seas fishing and 30 classes of vessels having 100-500 GRT which are probably engaged in coastal fishing.

6. *Primorye Fisherman*, 27 August 1993.

7. The duty on exports of fishery products which previously amounted to a prohibitive 26 percent of the value of such products, has been reduced to 10 percent in 1993.

8. Kravanja, Milan,*op. cit.*

9. Japan, USSR, Spain, United States, and Norway -- they were selected as the five countries with the largest fishing gross registered tonnage.

10. This number is taken from Lloyd's, *World Fleet Statistics at 31 December 1992*; it includes fishing vessels, but excludes fishery support vessels. The vessels listed have a gross registered tonnage of at least 100 tons, but most have over 500 GRT, a number that denotes high-seas units.

11. The entire EC fishery support fleet of 22 vessels has only a total tonnage of 24,276 gross tons, according to Lloyd's *World Fleet Statistics at 31 December 1992.*

12. These data are also taken from Lloyd's *World Fleet Statistics at 31 December 1992.* They are thus comparable with the Russian data.

13. To avoid any confusion in reader's minds: fishing vessels are those vessels that actually engage in catching fish and shellfish or harvest other aquatic products (e.g., seaweeds). Fishery support vessels are those that support the operations of fishing vessels (motherships, tankers, processing vessels, floating factories, fish carriers, etc., to mention only a few). Fishery vessels are the sum of fishing and fishery support vessels.

14. Both figures for the 1992 catch are preliminary and they include the freshwater catch.

15. *Utro Rossii* (Moscow), 29 April 1993.

16. *Kamchatka Fisherman*, No.19, 1993; and *Rybatskie Novosti* (Moscow), No. 2, January 1993.

17. Radio Moscow, 3 August 1992.

18. *Vladivostok*, 8 August 1992; and *Red Banner*, 26 November 1992.

19. Two TROPIKs still survive in the Ukrainian registry of fishing vessels.

20. Moscow Radio, 2 February 1990; and *Fishing News International* (London), December 1989.

21. *Fishing News International,* London (*FNI*), December 1991.

22. *Eurofish Report*, 30 July 1992; and *FNI*, March 1993.

23. *FNI*, March 1993; and *World Fishing*, October 1993.

24. *FNI*, August 1993.

25. This vessel is apparently owned by DALMOREPRODUKT, a Vladivostok company.

26. *World Fishing*, October 1986; *Design News*, 9 February 1987; *FNI*, November 1987; *World Fishing*, July 1988; *World Fishing*, June 1989; and *Soviet Far East Update*, March 1991.

27. *FNI*, November 1987; and Moscow Radio, 17 February 1989.

28. *Krasnoye Znamya*, 7 September 1993.

29. *Russian Far East Update*, August 1993; and Soviknes Verft AS, Personal Communication, September 1993.

30. *FNI*, April 1993.

31. *Eurofish Report*, 2 July 1992.

32. *FNI*, January 1993.

33. Their names are: the *Admiral Nevelskoi, Mys Lamanon, Navarin, Nevelsk, Nordkapp, Professor Nansen, Rybak, Vasilii Goldvin, and Vitjus Bering*; all were built between 1990 and 1992.

34. U.S. Navy, Office of Naval Intelligence, 30 July 1993.

35. Moscow Radio, 20 October 1988, 1 January 1989 and 14 February 1989.

36. U.S. Navy, Office of Naval Intelligence, 30 July 1993.

37. *FNI*, March 1990.

38. *FNI*, November 1991 and January 1992.

39. *FNI*, May 1993.

40. *Primorye Fisherman*, No.5 & No.7, February 1993; *Vladivostok,* 6 March 1993; and *Utro Rossii*, 11 July 1993.

41. *FNI*, May 1993; and *Russian Far East Update*, May 1993.

42. This vessel, belonging to the joint-stock company, Nevod (a spin-off of VBTRF), was detained by the Maldives Coast Guard in mid-March 1993, on an Indian Ocean passage to Bangkok. Mr. Oleinik, a Deputy Chief of VBTRF, claimed that the vessel was only passing by and not fishing. *Primorye Fisherman*, No. 13, April 1993. In May 1993, TASS reported that the Maldives authorities released the *Tellina* after discovering that it was not equipped for fishing, but was in reality used as a transport vessel.

43. *FNI*, June 1991, September 1991, and October 1992. The only vessel matching this description on the ONI list of Russian vessels is the *Kaouri* (TIVELA class, 1991, 2,129 GRT) which was reflagged to Liberia, but is still owned by Russia.

44. Information for this section was collected over the years by M. Kravanja, one of the authors of this report, and was verified by the U.S. Embassies in various countries at the end of 1992.

45. *Kamchatka Fisherman*, 30 October 1992.

46. U.S. Embassy, Buenos Aires, 22 August 1993.

47. For additional information see the Falkland Islands section in Vol. IV (Latin America).

48. In the early years of the agreement, the Soviets were limited to 18 vessels and 180,000 t per year, and the Government of Argentina was paid 3 percent of the export value of the catch. In 1990, the limits were dropped to 15 vessels and 150,000 t, and the fee was raised to 15 percent of the export value. In 1991, the limits were dropped further, 10 vessels and 100,000 t; they fell to 5 vessels and 50,000 tons in 1992. U.S. Embassy, Buenos Aires, August 4, 1993.

49. For details on the agreement see Jacobson and Weidner, "Argentine-Soviet fishery relations," *op. cit.*, and Jacobson and Weidner, "Soviet-Latin American Fishery Relations, 1961-89," *International Fishery Reports*, (IFR-89/39), May 5, 1989.

50. U.S. Embassy, Buenos Aires, August 4, 1993.

51. The names of the two Russian-Argentine joint ventures were: Bospor S.A. and Latar S.A., according to "Empresa mixta con U.R.S.S.," *Redes*, No. 57, 1991, p. 60.

52. Moscow World Service in English, 26 October 1992.

53. *Primorye Fisherman*, April 1993.

54. Jacobson and Weidner, *op. cit.*

55. For details see Jacobson and Weidner, *op. cit.*

56. Russian radio broadcast, 1700 GMT, January 28, 1992.

57. For details on the Soviet fishery Jacobson and Weidner, *op. cit.*

58. N. Agüero and Max and Vilma Correa, "Análisis de Rentabilidad Relativa y Perspectivas de los Barcos Factorias en Chile," in Teofilo Melo, ed., *Estudios en Pesquerias Chilenas*. Valparaiso: Universidad Catolica de Valparaiso, 1985, p. 89.

59. For background on Soviet-Chilean fishery relations, see Jacobson and Weidner, *op. cit.*

60. "Soviet fishing consortium deal under discussion," Radio Cooperativa Network, Santiago broadcast, 2200 GMT, September 26, 1990.

61. Esperia Bonilla, Under-Secretariat of Fisheries, Personal Communication, 9 August 1993.

62. The authors have not been able to identify the Soviet "Global" Research Institute mentioned in the source, but the Chileans could be referring to the former All-Union Research Institute for Fisheries and Oceanography (VNIRO) which is now the All-Russian Research Institute for Fisheries and Oceanography (VNIRO).

63. Personal Communication, Dennis Weidner, National Marine Fisheries Service, Office of International Affairs, 1993.

64. "Cuban aid for Galicia," *Spanish Fishing News*, August 27, 1992.

65. See the Argentine chapter in volume IV (Latin America).

66. Information on the privatization process in Russia is limited. The authors noted that the major former Russian state Fishery Administrations (SEVRYBA, DALRYBA, and SOVRYBFLOT) are now referred to as "associations." Most of the officials that previously ran these state-owned corporations appear to have management control of the new associations. Insufficient information, however, is available on their current legal status. Some of the vessels transferred to Panamanian and other flag-of-convenience flags may now be owned and operated by new private corporations set up outside Russia by Russian citizens.

67. "Russian vessels raise 'pirate' flags," *Izvestiya*, June 4, 1993. Unsubstantiated reports charge that some former Soviet officials have made substantial sums by transferring fishery vessels to foreign owners from the Russian state-owned companies at a fraction of their value.

68. One 1990 report, for example, described a Taiwan squid jigger with about 20 other Taiwanese vessels. The vessel and two other Taiwan fishing vessels were transhipping their catch to the Panamanian-flag reefer, the *Sea Frost* for shipment to Japan. Jonathan Gordon, "Drift netting in the vicinity of the Azores," International Fund for Animal Welfare, press release, 1990.

69. D. Weidner & D. Hall, "Latin America," *World Fishing Fleets: An Analysis of Distant-water Fishing Operations, Past-Present-Future*, Vol. 4, (NMFS, Silver Spring, MD., 1993).

70. Mayak Radio (Moscow), 2 February 1992.

71. *Primorye Fisherman*, No. 20, May 1993

72. *Russian Far East News*, July 1993.

73. *Russian Far East Update*, March 1993; and *Primorye Fisherman, February* 1993.

74. *Nikkan Suisan Keizai Shinbun,* May 19, 1989.

75. *Fishermen News*, N. 12/93, as printed in *Pacific Rim Fisheries Update*, June 1993, page 5.

76. *Krasnoye Znamya*, 21 October 1992; RIA News Agency (Moscow), 20 December 1992; and *Primorye Fisherman*, February 1993.

77. U.S. Embassy, Tokyo, December 22, 1992.

78. *Kamchatka Fisherman*, 23 July 1993.

79. TASS (Moscow), 25 September 1992; *Primorye Fisherman*, 9 October 1992.

80. Pyongyang KCNA, 9 November 1992.

81. Moscow Radio, 12 July 1989.

82. KYODO in English (Tokyo), 1 June 1990)

83. Yonhap in English, 9 September 1991.

84. FBIS, *Pacific Rim Economic Review*, 22 September 1993, pp. 13-14.

85. *Primorye Fisherman*, No. 7, February 1993.

86. TASS News Agency (Moscow), 28 February 1992.

87. U.S. Embassy, Seoul, 15 March 1993.

88. Yonhap News Service, August 2, 1991.

89. Yonhap News Agency, March 26, 1993.

90. Preobrazhenie is a small town east of Nakhodka in the Primorskii Krai (Maritime Region) of the Russian Far East.

91. *Primorye Fisherman*, No. 36, September 1993.

92. *Vladivostok*, 2 September 1993.

93. *Free China Journal*, 3 April, 10 July, and 21 July 1992; *Rossiskaia Gazeta*, 19 September 1992; ITAR-TASS (Moscow), 27 July, 14 September, 16 September, 23 September 1992; Radio Moscow, World Service in English, 27 July 1992; Agence France Press, 15 March 1992; *China Post*, 20 August 1992

94. American Institute in Taiwan, 7 June 1993.

95. *Rybak Sakhalina*, No. 30, 29 July 1993.

96. U.S. Embassy, Sofia, 29 September 1993. The 1979 agreement is apparently no longer valid since the Bulgarians are not permitted to fish inside the Russian 200-mile zone in the Barents Sea. The Bulgarian fishermen, however, continue to fish in the Barents Sea, but in its international waters rather than in the Russian 200-mile zone.

97. V.V. Revnivtsev, "Poisk Optimal'noi Strukturi SP," *Rybnoe Khoziaistvo* (Moscow), No. 1, 1993. Although the Russian source specifically mentions that the *Feniks* only "receives and processes the fish from Kamchatkan fishermen," Bulgarian catch statistics, provided by OKEANSKI RIBOLOV, show a 1991 and 1992 catch of Alaska pollock (803 t in 1991 and 410 t in 1992). The Alaska pollock could only have been caught in the Russian 200-mile zone or the nearby international waters of the "peanut hole", since the species is only harvested in the North Pacific. The FAO statistics for Bulgaria, however, show no Alaska pollock catch for those years. The discrepancy could not be explained with available data.

98. *Pari* (Sofia), 12 May 1993.

99. Faroese Statistical Bulletin, May 1993.

100. TASS News Agency (Moscow), 24 February 1992; and *Fishing News International*, May 1992.

101. *Diplomaticheskii Vestnik* (Moscow), No. 3-4, February 1993.

102. Interfax News Agency (Moscow), 16 February 1993; and *Federatsiya* (Moscow), No. 35, 30 March 1993, p.7.

103. *Eurofish Report,* 25 February 1993.

104. *Fishing News International*, October 1992.

105. The agreement entered into force on 3 February 1978. It remains in force automatically for successive 5-year periods unless one of the contracting parties advises the other, in writing, 6 months prior to the expiration of the agreement, that it wants to withdraw.

106. *Sbornik Dvukhstoronnikh Soglashenyi SSSR po Voprosam Rybnogo Khoziayaistva, Rybolovstva i Rybokhoziaystvennikh Issledovanyi*. VNIRO (Moscow), 1987.

107. This amount will be reduced by 50,000 t for each year of the 3-year agreement.

108. *La Peche Maritime*, October 1992, p. 459.

109. During 1986-1988, the Soviet Union and Portugal harvested 80 percent of the Cape hake catch off Southwest Africa, while the Soviet Union, East European high-seas fishing fleets of Romania, Bulgaria, and Poland, in addition to Cuba and Spain, together harvested 78 percent of the horse mackerel catch. The fishery in this region is regulated by the International Commission for the Southeast Atlantic Fisheries (ICSEAF).

110. U.S. Embassy, Windhoek, 23 April and 15 June 1993. The Russian stern factory trawlers dominate the mid-water trawling industry. A total of 42 foreign and chartered vessels operate in this fishery which accounts for 76 percent of the gross registered tonnage (192,000 GRT) of the total tonnage allowed to fish off Namibia (240,000 GRT). The Embassy reports that "nearly the entire mid-water fleet appears to be ex-Soviet distant-water vessels" mostly chartered by local companies. The Namibian branch of SOVRYBFLOT which supervises the joint venture arrangements from Moscow has reportedly chartered 12 mid-water trawlers.

111. U.S. Embassy, Lagos, 2 July 1993. Russia is no exception, Nigeria also has not negotiated access agreements with any other of the major high-seas fishing powers (Japan, Taiwan, ROK, EC, etc.).

112. U.S. Embassy, Sanaa, 20 March 1992.

Appendix 1. USSR. Number of high-seas fishing and fishery support vessels, 1975-92.

Year	Fishing	Support	Total
	Number of vessels		
1975	1,602	466	2,068
1976	1,700	473	2,173
1977	1,811	474	2,285
1978	1,881	472	2,353
1979	1,917	469	2,386
1980	1,975	478	2,453
1981	1,900	460	2,360
1982	1,927	547	2,474
1983	1,950	449	2,399
1984	1,916	448	2,364
1985	1,921	537	2,458
1986	1,945	526	2,471
1987	1,936	520	2,456
1988	1,932	519	2,451
1989	1,870	501	2,371
1990	2,040	592	2,632
1991	2,079	598	2,677
1992*	2,112	599	2,711

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

* In December 1991, the USSR ceased to exist and was replaced by the Commonwealth of Independent States (CIS) which, however, excludes the three Baltic republics (Estonia, Latvia, and Lithuania).

Appendix 2. USSR. Number of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Over 4,000	
	Number of vessels				
1975	829	130	638	5	1,602
1976	869	139	687	5	1,700
1977	908	140	734	29	1,811
1978	939	141	770	31	1,881
1979	953	144	792	28	1,917
1980	971	150	823	31	1,975
1981	852	155	855	38	1,900
1982	849	163	877	38	1,927
1983	847	165	902	36	1,950
1984	798	189	889	40	1,916
1985	783	215	878	45	1,921
1986	781	245	868	51	1,945
1987	761	274	849	52	1,936
1988	758	283	837	54	1,932
1989	715	273	816	66	1,870
1990	830	276	821	113	2,040
1991	845	267	835	132	2,079
1992*	858	274	835	145	2,112

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

* In December 1991, the USSR ceased to exist and was replaced by the Commonwealth of Independent States (CIS) which, however, excludes the three Baltic states (Estonia, Latvia, and Lithuania).

Appendix 3. USSR. Number of high-seas fishery support vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Over 4,000	
	Number of vessels				
1975		(90)*	124	252	466
1976		(90)*	119	264	473
1977		(120)*	107	247	474
1978		(130)*	101	241	472
1979		(131)*	102	236	469
1980		(134)*	103	241	478
1981		(127)*	94	239	460
1982		(124)*	92	241	457
1983		(111)*	91	247	449
1984	91	20	90	247	448
1985	92	20	88	256	537
1986	88	20	88	280	526
1987	86	20	87	277	520
1988	88	19	85	277	519
1989	79	19	79	280	501
1990	101	19	75	289	592
1991	103	18	75	288	598
1992	106	16	72	287	599

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

* Lloyd's did not list separately two vessel categories (500-999 GRT and 1,000-1,999 GRT) for the years 1975-83; instead, these sizes were included in one vessel category of 100-1,999 GRT. The figures in parentheses were obtained by calculating the percentage of vessels in the 100-499 GRT class in 1984 (given for the first time that year) from the total figure for all 100-1,999 GRT vessel classes (which was given each year from 1975-92). The same percentage was then deducted each year before 1984.

Appendix 4. Russia. Fishing and fishery support fleet, by vessel class, number of vessels, total and average gross registered tonnage, and country and year of construction: 1951-1993

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
ABRUKA	1	433	433	USSR	1961
AGAT	1	166	166	USSR	1984
AKADEMIK SHOKALSKIY	1	339	339	Finland	1951
AKSAY	4	13,440	3,360	Finland	1963-65
ALPINIST	238	171,618	721	USSR	1971-91
ALTAY	7	24,688	3,526	Finland	1968-73
ALTAY (2)	30	98,631	3,287	USSR	1969-75
ANDIZHAN	2	6,487	3,243	GDR	1962
ANDREY ZAKHAROV	7	91,137	13,019	USSR	1961-65
ANDREY ZAKHAROV MOD A	3	39,731	13,243	USSR	1967-69
ANDRIAS I HVANNASUNDI	1	1,803	1,803	Norway	1986
ANNA AKHMATOVA	2	9,150	4,575	Poland	1989-90
ANTARKTIDA	1	6,392	6,392	USSR	1985
ATLANTEAN II	1	4,042	4,042	Norway	1987
ATLANTIK	80	186,901	2,336	GDR	1966-76
B 14	1	642	642	Poland	1958
BALTIKA	53	5,796	109	USSR	1974-89
BARENTSEVO MORE	65	97,670	1,502	USSR	1974-85
BASKUNCHAK	8	13,732	1,716	USSR	1964-71
BAUSKA	1	12,588	12,588	Poland	1967
BOLOGOYE	9	3,006	334	USSR	1959-62
BUKHTA RUSSKAYA	4	26,428	6,607	USSR	1985-88
BUKHTA RUSSKAYA MOD A	3	20,967	6,989	USSR	1990-91
DAR MLODZIEZY	1	2,385	2,385	Poland	1988
DNEPR	10	13,550	1,355	USSR	1969-71
DRUZHBA	5	3,451	690	GDR	1954-56
FRYAZINO	1	1,722	1,772	Finland	1960
FUKUYOSHI MARU MOD A	1	299	299	Japan	1973
GIRULYAY	2	564	282	USSR	1983-84
GOLITSYNO	7	4,928	704	USSR	1986-90
GORIZONT	17	77,129	4,537	USSR	1976-83
IVAN BOCHKOV	33	96,884	2,935	Poland	1979-88
JUNGE WELT	1	10,192	10,192	GDR	1967
KALININGRADNEFT	17	81,957	4,821	Finland	1979-82
KAMCHATSKIY SHELF	4	33,156	8,289	USSR/Ukraine	1989-92
KAMCHATSKIYE GORY	4	38,640	9,660	Sweden	1964-65
KAPITAN KARTASHOV *	2	2,158	1,079	Norway	1993
KARELIYA	29	5,831	201	USSR/Ukraine	1971-79
KARL LIBKNEKHT	41	484,963	11,828	GDR	1970-91
KASPIY	18	19,830	1,101	GDR	1968-71
KERCH	13	1,352	104	USSR	1985-89
KHABAROV	3	1,206	402	USSR	1953-54
KHABAROV MOD A	2	926	463	USSR	1960
KHOBI	2	1,590	795	USSR	1958
KIROVETS	26	4,940	190	USSR	1984-90
KOMANDOR	4	10,472	2,618	Denmark	1990
KONSTITUTSIYA SSSR	6	94,910	15,818	Poland	1979-81
KONTUR	1	264	264	GDR	1955
KOSMOS	45	132,677	2,948	Poland	1966-70
KREVETKA MOD A	3	447	149	USSR	1981-84
KRONSHTADT	74	198,557	2,683	USSR	1974-78
LAMUT	1	4,982	4,982	Japan	1959
LASKARA	1	1,435	1,435	Poland	1972
LAUKUVA	11	3,949	359	USSR	1989-91
LEDA	22	5,060	230	Poland	1985-87
LENINSKIY LUCH	4	20,879	5,219	Japan	1964-65
LESKOV	1	2,802	2,802	Poland	1961
LUCHEGORSK	55	154,012	2,800	USSR	1969-74
LUCHEGORSK MOD A	1	2,792	2,792	USSR	1970
MANEVRENNYY	367	60,351	164	USSR	1969-84
MAYAK	204	130,642	640	USSR	1963-81
MAYAKOVSKIY	99	299,635	3,026	USSR	1958-73
MIKAMI MARU	1	2,538	2,538	Japan	1964

Appendix 4. Russia. Continued.

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
MIRNYY	1	844	844	USSR	1959
MIYAJIMA MARU	1	6,370	6,370	Japan	1986
MOONZUND	15	114,840	7,656	GDR	1988-91
MORYANA	32	76,971	2,405	USSR	1982-90
MORYANA MOD A	4	9,368	2,342	USSR	1990-91
MYS TARAN	1	404	404	FRG	1954
NADEZHNYY	79	35,924	454	USSR	1978-91
NEREIDA	1	638	638	USSR	1965
NEVELSK	9	17,092	1,899	Norway	1990-92
OKEAN	2	1,010	505	GDR	1959-60
OKHOTSKOYE MORE	2	36,604	18,302	France	1971
OMA	9	1,566	174	USSR	1965-68
ORLENOK	99	150,718	1,522	GDR	1981-87
OSTROV RUSSKIY	5	48,975	9,795	Sweden	1969-70
OSTSEE	2	1,288	644	GDR	1966-67
PEVEK	2	6,559	3,279	Finland	1974-83
PIATIDESIATILETIE SSSR	10	130,766	13,076	USSR	1974-83
PIONERSK	10	139,192	13,919	Poland	1956-60
PLAYYA KHIRON	1	3,105	3,105	FRG	1963-67
POSET	4	73,129	18,282	USSR	1959
PRIBOY	6	65,764	10,960	Sweden	1972-80
PROFESSOR BARANOV	32	413,024	12,907	Poland	1964
PROMETEY	24	92,669	3,861	GDR	1971-82
PROMETEY MOD A	65	254,335	3,912	GDR	1978-83
PULKOVSKIY MERIDIAN	69	267,763	3,880	USSR	1978-91
RADUZHNYY	62	39,547	637	USSR	1972-90
RADZIONKOW	12	64,392	5,366	Poland	1979-81
REMBRANDT	3	15,075	5,025	Netherlands	1965
RODINA	10	25,990	2,599	Poland	1978-80
RR 151	16	4,102	256	GDR	1951-57
RYBATSKAYA SLAVA	4	66,148	16,537	FRG	1966-67
SADKO	1	233	233	GDR	1970
SDS 001	3	1,119	373	USSR	1988-90
SEDOV	1	3,709	3,709	Germany*	1921
SELGA	2	200	100	USSR	1977-78
SEVERODVINSK	6	59,882	9,980	Poland	1959-61
SHUSHVE	6	1,174	195	Bulgaria	1969-71
SIBIR	27	155,418	5,756	USSR	1963-72
SKAT	1	210	210	USSR	1983
SKRYPLEV	18	81,821	4,545	Denmark	1962-71
SODRUZHESTVO	3	96,288	32,096	Finland	1985-90
SOTRUDNICHESTVO	6	46,830	7,805	Spain	1991-94
SOVETSKAYA UKRAINA MOD A	1	33,154	33,154	USSR	1962
SPASSK	8	144,110	18,013	Japan	1965-66
SPRUT	1	4,769	4,769	Poland	1979
STANISLAVSKIY	1	3,106	3,106	Belgium	1959
SVETLOGORSK	2	7,100	3,550	Netherlands	1955-56
TATARSTAN	4	9,524	2,381	USSR	1977-84
TAVRIYA	19	65,497	3,447	USSR	1960-68
TELNOVSK	3	3,622	1,220	Hungary	1954-59
TIBIYA	11	6,567	597	USSR	1980-85
TIVELA *	10	21,290	2,129	Spain	1991-92
TROPIK	1	2,435	2,435	GDR	1965
TSESIS	6	1,828	304	GDR	1955-58
TUNTSELOV 1	5	1,325	265	USSR	1983-85
TYULEN 1	4	1,318	329	USSR	1983-88
VEGA	1	261	261	GDR	1953
VETER	1	4,639	4,639	GDR	1966
VIKINGS	1	1,340	1,340	FRG	1965
VLADIVOSTOK MOD A	2	34,122	17,061	FRG	1962-63
YANA	3	11,335	3,778	FRG	1956
YANTARNYY	5	31,383	6,276	USSR	1965-59

Appendix 4. Russia. Continued.

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
YEYSKIY LIMAN	2	9,830	4,915	FRG	1968
ZEELAND	2	6,226	3,113	Netherlands	1984
ZELENODOLSK	17	14,650	861	USSR	1963-69
ZHELEZNYAKOV	214	160,539	750	USSR/Ukraine	1969-92
ZVEROBOY	21	41,519	1,977	Poland	1973-77
MRTK	32	3,744	117	USSR	
UNSPECIFIED **	11	14,511	1,319	Foreign Countries	
UNSPECIFIED ***	50	20,641	412	USSR	
TOTALS	2,766*	6,121,285*	2,213		

Sources. U.S. Navy, Office of Naval Intelligence (ONI), July, 1993; Soviknes Verft AS, Personal Communication, 6 September 1993 (for the KAPITAN KARTASHOV class); *Fishing News International (FNI)*, June 1991, September 1991 & October 1992 (for TIVELA class).

* These vessels (2 KAP. KARTASHOVs and 12 TIVELAs), which have been delivered only recently, were not included in the ONI statistics, but were added to this list by the authors
** Vessels of unknown class, built abroad.
*** Vessels of unknown class, built in Soviet shipyards.

GDR - former German Democratic Republic (East Germany)

Note: The classes constructed in the USSR also include those built in Ukrainian and Lithuanian shipyards.

Appendix 5. Russia. High-seas fishing fleet reduction, by name of vessel, class, gross registered tonnage, country and year of construction, and disposition; 1993.

Vessel name	Class	GRT	Construction		New Owner
			Country	Year	
REFLAGGED VESSELS - 25 units					
Admiral Zavoiko	NEVELSK	1,899	Norway	1991	Cyprus
Aleksei Chirikov	NEVELSK	1,899	Norway	1990	Cyprus
Amaltal Columbia	NEVELSK	1,899	Norway	1992	New Zealand
Atlasova Sala	OSTROV RUSSKII	9,795	Sweden	1970	Lithuania
Avangard	AVANGARD	2,649	Norway	1989	Cyprus*
Bukhta Naezdnik	NEVELSK	1,899	Norway	1991	Cyprus
Chukhotka	SEVERODVINSK	10,033	Poland	1962	St. Vincent*
Kaouri	TIVELA	2,129	Spain	1991	Liberia*
Kapitan Churilov	KARL LIBKNEKHT	12,413	Germany	1991	Panama*
Kildinskyi Proliv	KARL LIBKNEKHT	12,406	Germany	1989	Panama*
Klaipedskii Bereg	KARL LIBKNEKHT	11,755	Germany	1990	Cyprus*
Kolskyi Zaliv	KARL LIBKNEKHT	12,410	Germany	1986	Panama*
Komtek II	BARENTSOVO MORE	1,178	USSR	1979	Panama
Kosmonavt Gagarin	SIBIR	5,942	USSR	1968	Azerbaijan
Motovskyi Zaliv	KARL LIBKNEKHT	12,383	Germany	1984	Panama*
Musson	PLAYYA KHIRON	3,227	Germany	1961	Ukraine
Mys Vindis	NEVELSK	1,899	Norway	1991	Cyprus
Nika	KHOBI	795	USSR	1961	Latvia
Novik	NEVELSK	1,899	Norway	1991	Cyprus
Pamyat Ilyicha	KARL LIBKNEKHT	12,403	Germany	1988	Panama*
Petr Iljin	NEVELSK	1,919	Norway	1992	Cyprus
Sterkoder	NEVELSK	1,899	Norway	1991	Cyprus*
Straume	50 LET SSSR	13,083	USSR	1974	Latvia
Sudmijos Ilanka	AMURSKYI ZALIV	12,891	France	1970	Lithuania
Vilyuchinskiy	NEVELSK	1,899	Norway	1990	Cyprus
		152,603			
INACTIVE VESSELS - 9 units					
Amderma	ATLANTIK	2,177	GDR	1967	**
Davydov	SKRYPLEV	4,698	Denmark	1963	***
Indigirka	YANA	3,788	Germany	1955	@
Karpaty	ALTAI	3,390	USSR	1969	@
Mikhail Ivchenko	KOSMOS	2,987	Poland	1966	@
Pulkovo	MAYAKOVSKII	3,170	USSR	1965	**
Roslavl	TROPIK	2,435	GDR	1966	@@
Sapfir	MAYAKOVSKII	3,170	USSR	1962	**
Zapolyarniyi	SKRYPLEV	4,699	Denmark	1965	**
		30,514			
VESSELS FOR SALE - 3 units					
Aleksei Chuev	POSET	17,764	USSR	1980	#
Vasilii Chernyshev	POSET	18,455	USSR	1973	#
Kosmonavt	TAVRIYA	3,556	USSR	1967	#
		39,775			

TOTAL = 37 vessels TOTAL GROSS TONNAGE = 222,892 GRT

Sources U S Navy, Office of Naval Intelligence, 30 July 1993, *Russian Far East Update*, May 1993 (for vessels for sale).

* These vessels are listed as still owned by Russia
** Listed as inactive in February/March 1993
*** Listed as inactive in October 1992
@ Listed as inactive in April 1993
@@ Listed as inactive in June 1993
# VBTRF was selling these 3 veteran fish-processing vessels for 4 billion, 3 5 billion, and 1.5 billion rubles, respectively in early 1993

Appendix 6. Soviet Union. Shipyards building fishery vessels, located in the former USSR, by republic, region, city of location, and vessel classes built, 1975.

RUSSIAN SHIPYARDS

I. Northern

A. Petrozavodsk
   1. Avangard (*Karelia)**
B. Murmansk
C. Arkhangelsk
   1. Maimalesan (vessels transporting live fish on rivers)
   2. Krasnaia Kuznitsa Repair Shipyard

II. Western

A. Leningrad
   1. Admiralteiskii (*Sovetskaia Rossiia*, *Vostok*, *Khabarov*, *50-let*, *Andrei Zakharov*)
   2. Baltiiskii (*Baltika*)
   3. Zhdanov
B. Kaliningrad
   1. Svetlovskii (*Experiment I and II*)
   2. Sovetsk-Sovetskii zavod promysl. sudostroeniia (*Selga*). Builds 300-400 horsepower catamaran stern trawlers.

III. Caspian Sea

A. Astrakhan-Imeni Stalina Shipyard** (*Baltika*, small fiberglass vessels)
B. Orenburg Chkalova (*Luchegorsk*)
C. Rybinsk (small refrigerated transports, unknown class)

IV. Pacific

A. Mainland
   1. Khabarovsk (*SRTM, RS, Alpinist*)
      a. Okhotskii
      b. Kirov (*Raduzhnyi*)
   2. Blagoveshchensk (seiners)
   3. Sretenskii (seiners)
   4. Kamchatka (*Alpinist)*
   5. Primorskii Krai (*Alpinist*)
   6. Nikolaevsk na Amure (*RS-300, Alpinist, Nadezhnii*, small crab vessels)
   7. Tobol'sk
B. Sakhalin

Appendix 6. USSR. Continued.

C. Gorkii
    1. Gorokhovets (*Eruslan*)
    2. Gorodets
D. Volgograd
    1. Volzhskii (502R, *SRTM, Alpinist*)

V. Other Yards

A. Iaroslavl' (*Maiak-800, Alpinist)*
B. Sverdlovsk
C. Zelenodol'sk *(Laukuva)*
D. Novorossiisk (*BMRT* of unknown class)
E. Petrozavodsk

UKRAINIAN SHIPYARDS

I. Black Sea

A. Nikolaev
    1. Oktiabrskii ** (*Maiakovskii, Meridian*)
    2. Chernomorskii *** (*Altair, Pioner Latvii, Luchegorsk, Kronshtadt, Maiakovskii, Pulkovskii Meridian, Sovetskaia Ukraina, Tavriya*)
    3. 61 Komunard (*Sibir, Beringov Proliv, Bukhta Russkaya, Antarktida, Altair, Gorizont*)
    4. Okean (*Altay)*

B. Kherson
    1. Kuibyshev
C. Krasnodarsk
D. Izmail (*Altair*)
E. Kiev
    1. Leninskaia Kuznitsa (*SRTM, Maiak-800, SRTK, Alpinist,* seine and shrimp trawlers)

LITHUANIAN SHIPYARDS

I. Klajpeda

A. Baltiia (*Matematik, Maiakovskii, Luchegorsk, Barents, Moryana)*
B. Zapadnyi

* Classes of vessels built in a particular shipyard are noted in parentheses.
** The name of this shipyard has probably changed.
*** This shipyard was also known as the Nosenko Shipyard in the 1960s.

Appendix 7. Russia. Deliveries of fishing and fishery support vessels from domestic shipyards, by vessel class, number of vessels, total and average gross registered tonnage, and country and year of construction: 1951-1993.

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
ABRUKA	1	433	433	USSR	1961
AGAT	1	166	166	USSR	1984
ALPINIST	238	171,618	721	USSR	1971-91
ALTAY (2)	30	98,631	3,287	USSR	1969-75
ANDREY ZAKHAROV	7	91,137	13,019	USSR	1961-65
ANDREY ZAKHAROV MOD A	3	39,731	13,243	USSR	1967-69
ANTARKTIDA	1	6,392	6,392	USSR	1985
BALTIKA	53	5,796	109	USSR	1974-89
BARENTSEVO MORE	65	97,670	1,502	USSR	1974-85
BASKUNCHAK	8	13,732	1,716	USSR	1964-71
BOLOGOYE	9	3,006	334	USSR	1959-62
BUKHTA RUSSKAYA	4	26,428	6,607	USSR	1985-88
BUKHTA RUSSKAYA MOD A	3	20,967	6,989	USSR	1990-91
DNEPR	10	13,550	1,355	USSR	1969-71
GIRULYAY	2	564	282	USSR	1983-84
GOLITSYNO	7	4,928	704	USSR	1986-90
GORIZONT	17	77,129	4,537	USSR	1976-83
KARELIYA	2	5,831	201	USSR	1971-79
KERCH	13	1,352	104	USSR	1985-89
KHABAROV	3	1,206	402	USSR	1953-54
KHABAROV MOD A	2	926	463	USSR	1960
KHOBI	2	1,590	795	USSR	1958
KIROVETS	26	4,940	190	USSR	1984-90
KREVETKA MOD A	3	447	149	USSR	1981-84
KRONSHTADT	74	198,557	2,683	USSR	1974-78
LAUKUVA	11	3,949	359	USSR	1989-91
LUCHEGORSK	55	154,012	2,800	USSR	1969-74
LUCHEGORSK MOD A	1	2,792	2,792	USSR	1970
MANEVRENNYY	367	60,351	164	USSR	1969-84
MAYAK	204	130,642	640	USSR	1963-81
MAYAKOVSKIY	99	299,635	3,026	USSR	1958-73
MIRNYY	1	844	844	USSR	1959
MORYANA	32	76,971	2,405	USSR	1982-90
MORYANA MOD A	4	9,368	2,342	USSR	1990-91
NADEZHNYY	79	35,924	454	USSR	1978-91
NEREIDA	1	638	638	USSR	1965
OMA	9	1,566	174	USSR	1965-68
PIATIDESIATILETIE SSSR	10	130,766	13,076	USSR	1974-83
POSET	4	73,129	18,282	USSR	1959
PULKOVSKIY MERIDIAN	69	267,763	3,880	USSR	1978-91
RADUZHNYY	62	39,547	637	USSR	1972-90
SDS 001	3	1,119	373	USSR	1988-90
SELGA	2	200	100	USSR	1977-78
SIBIR	27	155,418	5,756	USSR	1963-72
SKAT	1	210	210	USSR	1983
SOVETSKAYA UKRAINA MOD A	1	33,154	33,154	USSR	1962
TATARSTAN	4	9,524	2,381	USSR	1977-84
TAVRIYA	19	65,497	3,447	USSR	1960-68
TIBIYA	11	6,567	597	USSR	1980-85
TUNTSELOV 1	5	1,325	265	USSR	1983-85
TYULEN 1	4	1,318	329	USSR	1983-88
YANTARNYY	5	31,383	6,276	USSR	1965-59
ZELENODOLSK	17	14,650	861	USSR	1963-69
ZHELEZNYAKOV	214	160,539	750	USSR	1969-92
MRTK	32	3,744	117	USSR	1987-92
UNSPECIFIED *	50	20,641	412	USSR	N/A
TOTALS = 55 classes	2,014	2,679,913			

Source U S Navy, Office of Naval Intelligence, 30 July 1993

* Vessels of unknown class built in Soviet shipyards

Note The classes constructed in the USSR also include those classes built in Ukrainian and Lithuanian shipyards

Appendix 8. Soviet Union/Russia. Deliveries of fishing and fishery support vessels from foreign shipyards, by country and year of construction, vessel class, average gross registered tonnage (GRT), type of vessel, number of vessels delivered, and total GRT: 1951-1993.

Country/Year	Vessel class	GRT*	Vessel type	Number	Total GRT
BELGIUM - 1 vessel					
1959	STANISLAVSKIY	3,106	transport	1	3,106
BULGARIA - 6 vessels					
1969-71	SHUSHVE	200	trawler	6	1,200
DENMARK - 22 vessels					
1962-71	SKRYPLEV	4,545	trawler	18***	81,821
1990	KOMANDOR	2,618	fishery enforcement	4	10,472
					92,293
FINLAND - 35 vessels					
1951	AKAD. SHOKALSKIY	339	fishery research	1	339
1956-60	PEVEK	3,279	tanker	2	6,559
1960	FRYAZINO	1,722	cargo	1	1,722
1963-65	AKSAY	3,360	tanker	4	13,440
1968-73	ALTAY	3,526	tanker	7	24,688
1979-1982	KALININGRADNEFT	4,821	tanker	17	81,957
1985-89	SODRUZHESTVO	32,096	crab mothership	3	96,288
					224,993
FEDERAL REPUBLIC OF GERMANY - 20 vessels					
1912	Ussuri**	4,597	transport	1	4,597
1921	SEDOV	3,709	fishery training	2	7,418
1941	Dzhamrat**	723	tanker	1	723
1954	MYS TARAN	404	refrig. transport	1	404
1956	YANA	3,778	refrig. transport	3	11,335
1956	Tauysk**	3,814	transport	1	3,814
1959	PLAYYA KHIRON	3,105	refrig transport	1	3,105
1962-63	VLADIVOSTOK	17,061	fish-processing	2	34,122
1965	VIKINGS	1,340	trawler	1	1,340
1966	VETER	4,639	refrig transport	1	4,639
1966-67	RYBATSKAYA SLAVA	16,537	fish-processing	4	66,148
1968	YEYSKIY LIMAN	4,915	transport	2	9,830
					147,475
FRANCE - 2 vessels					
1971	OKHOTSKOE MORE	18,302	refrig transport	2	36,604
GERMAN DEMOCRATIC REPUBLIC - 382 vessels					
1951-57	RR 151	256	trawler	16	4,102
1953	VEGA	261	refrig transport	1	261
1954-56	DRUZHBA	690	refrig. trawler	5	3,451
1955	KONTUR	264	trawler	1	264
1955	Letnik**	119	trawler	1	119
1955-58	TSESIS	304	tanker	6	1,828
1957	Gunib**	305	trawler	1	305
1959-60	OKEAN	505	side trawler	2	1,010
1962	ANDIZHAN	3,243	cargo	2	6,487
1965	TROPIK	2,435	stern factory trawler	1	2,435
1966-67	OSTSEE	644	refrig trawler	2	1,288
1966-76	ATLANTIK	2,336	stern factory trawler	80	186,901
1967	JUNGE WELT	10,192	fish-processing	1	10,192
1968-71	KASPYI	1,101	refrig trawler	18	19,830
1970	SADKO	233	fishery research	1	233
1970-91	KARL LIBKNEKHT	11,828	refrig transport	41	484,963
1971-83	PROMETEI	3,899	stern factory trawler	89	347,004
1981-87	ORLENOK	1,522	stern factory trawler	99	150,718
1988-91	MOONZUND	7,656	stern factory trawler	15	114,840
					1,336,231
HUNGARY					
1954-59	TELNOVSK	1,220	transport	3	3,622

Appendix 8. Soviet Union/Russia. Continued.

Country/Year	Vessel class	GRT*	Vessel type	Number	Total GRT
ITALY					
1980	Smena**	147	shrimp trawler	1	147
JAPAN - 17 vessels					
1959	LAMUT	4,982	fish-processing	1	4,982
1964	MIKAMI MARU	2,538	factory trawler	1	2,538
1964-65	LENINSKII LUCH	5,219	fish-processing	4	20,879
1965-66	SPASSK	18,013	fish-processing	8	144,110
1969	Kyuho Maru**	284		1	284
1973	FUKUYOSHI MARU	299	trawler	1	299
1986	MIYAJIMA MARU	6,370	factory trawler	1	6,370
					179,462
NETHERLANDS - 7 vessels					
1955-56	SVETLOGORSK	3,550	refrig. transport	2	7,100
1965	REMBRANDT	5,025	factory trawler	3	15,075
1984	ZEELAND	3,113	factory trawler	2	6,226
					28,401
NORWAY - 13 vessels					
1986	ANDRIAS	1,803	stern factory trawler	1	1,803
1987	ATLANTEAN II	4,042	stern factory trawler	1	4,042
1990-1992	NEVELSK	1,899	stern factory trawler	9	17,092
1993	KAP. KARTASHOV	1,079	processing longliner	2	2,158
					25,095
POLAND - 205 vessels					
1958	B-14	642	refrig. trawler	1	642
1959-61	SEVERODVINSK (B-62)	9,980	processing baseship	6	59,882
1961	LESKOV (B-15)	2,802	stern factory trawler	1	2,802
1963-67	PIONERSK (B-64)	13,919	processing baseship	10	139,192
1966-70	KOSMOS (B-26)	2,948	stern factory trawler	45	132,677
1967	BAUSKA	12,588	tanker	1	12,588
1967-75	PROF. BARANOV (B-69)	12,907	processing baseship	32	413,024
1972	LASKARA	1,435	stern factory trawler	1	1,435
1973-77	ZVEROBOY	1,977	factory trawler	21	41,509
1979	SPRUT	4,769	factory trawler	1	4,769
1979-88	IVAN BOCHKOV	2,935	trawler	33	96,884
1978-80	RODINA	2,599	tuna clipper	10	25,990
1979-81	KONSTITUTSIYA SSSR	15,818	processing baseship	6	94,910
1979-81	RADZIONKOW	5,366	refrig transport	12	64,392
1985-87	LEDA	230	shrimp trawler	22	5,060
1988	DAR MLODZIEZY	2,385	fishery training	1	2,385
1989-90	ANNA AKHMATOVA	4,575	trawler	2	9,150
					1,107,291
PORTUGAL					
1992	Sankt Peterburg**	726	trawler	1	726
SPAIN - 25 vessels					
1991-92	TIVELA	2,129	tuna seiner	10	21,290
1991-94	SOTRUDNICHESTVO	7,805	factory trawler	15	117,075
					138,365
SWEDEN - 15 vessels					
1964	PRIBOY	10,960	refrig transport	6	65,764
1964-65	KAMCHATSKIE GORI	9,660	refrig transport	4	38,640
1969-70	OSTROV RUSSKII	9,795	refrig transport	5	48,975
					153,379

TOTAL GROSS TONNAGE = 3,478,390 GRT TOTAL VESSELS BUILT = 756

Sources. U.S. Navy, Office of Naval Intelligence, 30 July 1993; *Fishing News International (FNI)*, June 1991, September 1991 & October 1992 (for TIVELA class); *FNI*, March 1990, November 1991, January 1992 & May 1993 (for SOTRUDNICHESTVO class)

* The GRT of these vessels represents an approximate average gross tonnage of each vessel in that class.
** This is the name of the vessel. The class is unknown.
*** Two of these vessels, the *Locator* and the *Pelengator*, are used for fisheries research
Note. This appendix lists vessels that are presently on the Russian registry. It does not include vessels previously delivered and since scrapped, sold, or otherwise decommissioned

Appendix 9. Soviet Union. Inland, coastal, and distant-water fisheries by FAO statistical areas: 1975, 1980, and 1985-1991.

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland(07)	944.0	747.0	905.6	926.9	988.4	995.6	1019.7	974 9	1030 8
Coastal									
27	2406 3	1983.5	1239.2	999 9	945.3	781 4	644.2	524.4	967.2
37	349.8	397.2	344 6	390.6	261.3	347.3	206.9	93.0	53.7
61	2719.0	3195.8	5462.3	5823 0	5457.0	5296.9	4957.7	4516.3	3973.3
67	572.6	59.2	11 0	9.0	11.2	12 1	12 9	0 2	1 0
Subtotal	6047.7	5635.7	7057.0	7222.3	7500.1	6437.7	5821.7	5133.9	4995.2
Distant Water									
21	1166.9	108.3	133.4	147.7	152.3	149.6	155.4	197.1	125.5
31	69.0	-	-	-	-	-	-	0.8	-
34	1165.7	942.3	708.1	854.2	106.3	1395.0	1629.0	1688.6	1261.3
41	9 0	27.7	70.9	77.1	168.5	259.8	282.3	242.2	226.7
47	420.7	825.2	697.9	679.2	670.5	634.6	654.3	310.9	394 2
48	-	424.0	188.0	397.4	348.8	355.4	373.4	342.7	199.5
51	35.0	36.8	32.0	42.4	46.4	39.6	28.7	8.7	12.1
57	-	0.4	0.5	-	-	0.03	-	-	-
58	2.1	102.6	28.3	31.9	35.1	14.5	30.8	5.6	1.3
71	-	3.6	10.3	12.4	16.7	10.6	10.5	5.5	3.6
77	30.6	-	1.1	2.7	0.1	0.08	3.0	12.6	0.1
81	44 8	69.6	65.6	152.8	149.9	94.9	97.9	127.0	236.8
87	-	552.4	624.5	710.9	844 9	944.8	1202.3	1337.7	729 8
88	-	-	-	1.9	0.3	-	1.1	0.7	-
Subtotal	2943.8	3093.0	2560.6	3110.6	3616.1	3898.9	4468.7	4280.1	3190.9
Total	9935 6	9475.6	10522.8	11259 8	11159.6	11332.2	11310.1	10388.9	9216.9

Source FAO. *Yearbook of Fishery Statistics: Catches and Landings*; Rome, various years.

Note: The totals may not add because of rounding.

Key to FAO statistical fishing areas:

27 - Northeast Atlantic (includes Baltic Sea)
37 - Mediterranean Sea (includes Black Sea)
61 - Northwest Pacific (off Russian Far Eastern Coast)
67 - Northeast Pacific (off the U.S. West Coast and Alaska)

21 - Northwest Atlantic (off the United States and Canada)
31 - Western Central Atlantic (the Caribbean)
34 - Eastern Central Atlantic (off West Africa)
41 - Southwest Atlantic (off Brazil, Argentina, Falklands)
47 - Southeast Atlantic (off Angola, Namibia, and South Africa)
48 - Antarctic, Atlantic
51 - Western Indian Ocean (includes Seychelles)
57 - Eastern Indian Ocean (waters from Burma to Australia)
58 - Antarctic, Indian Ocean
71 - Western Central Pacific (off Indonesia and adjacent waters)
77 - Eastern Central Pacific (waters between Hawaii and U.S. and Mexican coasts)
81 - Southwest Pacific (off East Australia and New Zealand)
87 - Southeast Pacific (off western coasts of S. America, Chile, Peru)
88 - Antarctic, Pacific

Appendix 10. Russia. Fishery attaches and representatives, by country of service and name, 1993.

COUNTRY:

Australia - IKRIANNIKOV, Vladimir Ivanovich, former Director of the International Treaties and Organizations Division in the Office of International Affairs of the Soviet Ministry of Fisheries.

Angola - MOKRENKO, Petr Savelevich (replaced KOLESNIKOV, Viktor Mikhailovich)
Argentina - ZINCHENKO, Aleksei Alekseevich

Bulgaria - REVNIVTSEV, V.V. (replaced VOLGIN, Vyacheslav Petrovich)

Canada - MIKHAILOV, Anatolii Aleksandrovich. The Assistant Attache is VIDENEEV, Yurii I.

Cape Verde - PUGACHEV, Nikolai Mikhailovich

China - OREL, Iurii Grigorevich, former Director of the Pacific Fishery Scientific Exploratory Fleet Administration (TURNIF) in Vladivostok.

Cuba - SEKRETAREV, Eduard Konstantinovich

Denmark - STARCHENKO, Nikolai Nikolaevich (replaced BELOBRAGIN, Viktor Aleksandrovich, a former secretary of the Primorskii Krai Komsomol Committee.)

Egypt - SIROGA, Anatolii Ivanovich

Germany - MESHCHERIAKOV, Georgii Vasilevich, former Chief of the Kamchatka High-seas Fishing Administration.

Guinea-Bissau - SAVIN, Anatolii Vasilevich

Italy - MONAKOV, Boris Dmitrievich (Permanent Russian Observer at the Food and Agricultural Organization (FAO). A former Soviet Deputy Fisheries Minister. The Assistant Attaches are: FOKIN, Leonid A., and BOGDANOV, Sergei.

Japan - SINEL'NIKOV, Igor Zakharovich. The Assistant Attaches are: KAMENTSEV Vladimir Vladimirovich and VOROBIEV, Iurii D.

Korea, South (ROK) - LUZHNIKOV, Vitalii Mikhailovich, former First Deputy Minister of Fisheries of the USSR; before that he was the Head of the Fisheries Section in the Central Committee of the Communist Party of the USSR.

Appendix 10. Russia. Continued.

Korea, North - None currently. The last attache was PAUTOV, Vladimir Mikhailovich who is now Deputy Director of DALRYBA, responsible for International Affairs. This office may be scheduled for closure.

Morocco - TSURANOV, Vladimir Aleksandrovich

Mauritania - Present incumbent unknown. Former attache KOKOREV, Iurii Ivanovich was promoted to Deputy Chairman of the Committee on Fisheries of the Russian Federation in September 1993.

Mozambique - RUZOV, Andrei Dmitrievich

New Zealand - TKACHENKO, Konstantin Petrovich. (replaced BARMUTA, Vladimir Ivanovich)

Norway - LUKA, Georgii Ivanovich, former Director of PINRO Fisheries Research Institute in Murmansk from 1982-1990.

Peru - KARGIN, Mikhail Ivanovich, formerly Director General of the Northern Fisheries Administration, SEVRYBA.

Poland - KOVASIUK, Oleg Aleksandrovich (replaced USHAKOV, Aleksandr Petrovich)

Senegal - MUKHIN, Vladimir Vasilevich. The office is located in Dakar and also covers the neighboring Gambia.

Sierra Leone - DEMIANENKO, Vitalii Dmitrievich

Seychelles - SOKOLOV, Boris Gennad'evich, former Director of the Western Fisheries Administration, ZAPRYBA.

United States - BOVYKIN, Iurii Nikolaevich. The Assistant Attache is SOLODOVNIK, Viktor Nestorovich.

Uruguay - MEDUSHEVSKII, Nikolai Ivanovich

Vietnam - ZLOKAZOV, Anatolii Vasil'evich (replaced SHAIDUROV, Leonid Afanas'evich)

Yemen - BABENKO, Dmitrii Mikhailovich (replaced CHELEGA, Iurii Pavlovich)

Appendix 10. Russia. Continued.

RUSSIAN FISHERY ATTACHE OFFICES, BY CONTINENTS:

AFRICA	10
ASIA & OCEANIA	8
EUROPE	6
LATIN AMERICA	4
NORTH AMERICA	2
TOTAL	30

OFFICES RECENTLY CLOSED DOWN:

Guinea (Conakry)
Nicaragua (Managua)
Saõ Tome and Principe (Saõ Tome)

OFFICES RECENTLY OPENED:

Republic of Korea (Seoul)

VACANT OFFICES:

North Korea (Pyongyang)

Source: Milan Kravanja, Foreign Affairs Officer, Office of International Fisheries, NMFS, NOAA.

Note: This list was compiled in early 1992 from various sources. Its reliability was confirmed in October 1992 in a speech by the Chairman of the Russian Committee on Fisheries, Vladimir Korelskii, to Kamchatka fishermen. Korelskii stated that the Russian Committee on Fisheries had taken over 30 out of the 32 representational offices of the former Soviet Ministry of Fisheries. More recent information indicates that the incumbents have remained by and large in their positions, except as noted in the list.

726319 (542580) 9-92

3.3

UKRAINE

In the former Soviet Union, the fishery fleets of all republics operated as a unit divided only by the various fishing regions. This system, which prevailed for the past 40 years, was suddenly disrupted by the new political arrangements. Each independent country now had to organize its own support and transportation activities and obtain its own fuel. Ukraine has no oil resources and must, therefore, buy diesel oil from Russia or other countries. In addition, the bilateral agreements negotiated by the former Soviet Ministry of Fisheries are no longer valid. The Russian Federation, as the internationally recognized successor state to the Soviet Union, took over most of these agreements. Independent Ukraine has had to make new arrangements to obtain access to foreign 200-mile fishery zones. Ukraine has a sizeable fishing fleet, but it is aging -- the average age of fishing vessels is 14 years old. The future of the Ukrainian fishing industry is uncertain and will depend on its ability to obtain sufficient fishery resources to maintain the fleets' operations and to provide abundant protein to the domestic population.

CONTENTS

I. Background 150
II. Fishing Fleet 150
A. High-seas Fleet 151
B. Fleet Reduction 151
C. Vessel Classes 151
D. Domestic Shipyards 151
III. Catch and Grounds 152
A. Fisheries Catch 152
B. Fishing Grounds 153
IV. Fisheries Administration 154
V. Bilateral Fishery Agreements and Joint Ventures 154
VI. Fishery Companies 155
VII. Outlook 157
Sources 157
Endnotes 158
Appendices 160

Ukraine

Geographic Indicators
Total area: 603,700 km²
Land boundaries: 4,558 km
Coastline: 2,782 km
Natural resources: Iron ore, Coal, Manganese, Natural gas, Oil, Salt, Sulfur, Graphite, Titanium, Magnesium, Kaolin, Nickel, Mercury, and Timber

Demographic Indicators, 1991
Population: 51,832,000
Growth rate: 0.2%
Birth rate: 12 births per 1,000 population
Death rate: 12 deaths per 1,000 population
Life expectancy: 65 years male, 75 years female
Ethnic composition: Ukrainian 73%, Russian 22%, other 5 %

Political Indicators
Capital: Kiev
Independence: 24 August 1991
Chief of State: President Lenid Kravchuk

Infrastructural Indicators
Rail network: 22,800 km all 1.000 m guage, excludes industrial lines
Road network: 273,700 km of which 236,400 km is hard surface
Port: Odessa, Il'chevsk, Yuzhnyy, Nikolayev, Kherson, Sevastopol' Kerch', Berdyansk, and Mariupol'
Airport: Kiev

Social Indicators, 1989
Health
Doctors: 43.9 per 10,000 persons
Hospital beds: 135 per 10,000 persons
Standard of Living
Housing: 17.5 m² per person
Food consumption: 3,615 calories daily per person of which 40 percent is grain products and potatoes
Consumption expenditures: 1,692 rubles per person
Savings: 1,614 rubles per person

I. BACKGROUND

Ukraine occupies 603,700 square kilometers, or 2.7 percent of the former USSR, (nearly the size of Texas), and is the largest country in Europe besides Russia.[1] Its coastline along the Black Sea and the Sea of Azov extends for a total of 2,782 kilometers.

Ukraine was the second most populous Soviet republic with 51.9 million inhabitants, or about 18 percent of the population of the former USSR.[2]

Table 1. Ukraine. High-seas fishing and fishery support fleet, by number and type of vessel, 1991.

Type of vessel	Number
Fishing	135
Transport	77
Floating factories	4
Training	3
Unspecified	45
Total	264

Source: Baseinovoe Proizvodstvennoe Ob'edinenie Yugryba, Sevastopol, 1991

The fishing industry in Ukraine is mainly based in the Black Sea ports of Odessa, Sevastopol, and Kerch, while shipyards constructing fishery vessels are principally located near the port of Nikolaev.

II. FISHING FLEET

Confirmed data on the number of Ukrainian fishing vessels could not be obtained in time for inclusion in this report. The U.S. Embassy requested this information in June 1993, but has received no response from the Ukrainian State Committee on Fisheries to which the inquiry was directed. Three major statistical sources were consulted: a brochure published in 1991 by the Soviet Southern Fisheries Administration, YUGRYBA (table 1); a list of Ukrainian vessels provided by the U.S. Office of Naval Intelligence (table 2); and the Lloyd's Register of Shipping (table 3).

Table 2. Ukraine. Fishing fleet, by selected vessel capacity; 1993.

Capacity	Number	GRT	Average GRT
100-500 GRT	107	16,463	154
Above 500 GRT	247	890,360	3,605
TOTAL	354	906,823	2,554

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

The difference between the first two sets of figures for the high-seas fleet (264 against 247 vessels) is not great, and probably resulted from the decommissioning of over 20 Ukrainian registry fishing vessels from 1991 to 1993. One must also remember that during those two years the Soviet fishing vessels, which belonged to the Ukrainian Soviet Republic, were re-registered under the newly established registry of Ukraine. Unfortunately, YUGRYBA's 1991 brochure did not list vessel owners, or the names of

Table 3. Ukraine. Fishing and fishery support fleet, by number and total gross registered tonnage, December 1992.

Vessel type	Number	Total GRT
Fishing	272	469,512
Support	23	86,215
Total	295	555,727

Source: Lloyd's Register of Shipping Fleet Statistics at 31 December 1992 London, 1993

individual vessels, so that the decommissioned vessels could not be identified by comparing them with the detailed information provided by the U.S. Navy (appendix 1).

Lloyd's Register of Shipping reports the Ukrainian fishery fleet at 295 units on December 31, 1992. Of this total, 272 were fishing vessels and 23 fishery support vessels. The gross tonnage of these vessels was not identified and it is likely that all vessels have over 100 gross tons. The best explanation for the larger number of vessels seems to be that the Ukrainians did not notify Lloyd's of all decommissioned vessels.

A. High-seas Fleet

According to the U.S. Navy, the Ukrainian high-seas fishery fleet consisted of 247 units in July 1993 (appendix 1). Of this total, 232 units were medium and large trawlers, refrigerated transports, and baseships and processing vessels of various classes. Another 14 units were training and research vessels, and there was one tanker. The vast majority of these vessels were built in the shipyards of the former Soviet Union and the former East Germany. The average age of the Ukrainian high-seas fleet was 14 years for fishing vessels and 17 years for fishery support vessels.

B. Vessel Classes

The Ukrainian fleet has 47 various classes of fishing and fish-processing vessels (appendix 2). Most of them were built in the former Soviet Union (which included Ukrainian shipyards), in Poland, and in the former East Germany. Several tankers were built in Finland, while large processing stern trawlers (SKRYPLEV and REMBRANDT classes) were ordered from Denmark and the Netherlands, respectively. The stern factory trawlers of the N. KOVCHOVA class, probably the largest such trawlers in the world, were constructed in the Nantes shipyard in France.

C. Fleet Reduction

In 1993, Ukraine reduced its fishing fleet register by 6 vessels; 5 were reflagged to other countries, and 1 was decommissioned (appendix 3). These 6 vessels represented a total reduction of 18,945 gross registered tons. A mothership, the *Piatidesiatilet SSSR* and the medium trawler, *Aldebaran,* were turned over to the Russian Federation. A small trawler, *Nalle*, was reflagged to Estonia, a small factory trawler was reflagged to Malta[3], while a large stern factory trawler now flies the Panamanian flag. One trawler, the *Al Audem,* has been inactive since 29 January 1993. All of these vessels were built in Ukraine and are 15-20 years old.[4] As far as is known, none of these vessels was scrapped.

D. Domestic Shipyards

Ukraine has several shipyards which build fishery vessels; most are located in the southern city of Nikolaev on the Black Sea, but there is also a large shipyard in Kiev and in other cities (appendix 4). These shipyards construct a variety of trawlers and fishery support vessels, including the PULKOVSKII MERIDIAN-class of large freezer-trawlers[5], the ANTARKTIDA-class of large stern factory trawlers[6], and the BUKHTA RUSSKAYA-class of refrigerated cargo vessels[7]. A list of all known classes built in Ukrainian shipyards (which were formerly constructing fishery vessels for the entire Soviet Union) is given in appendix 4. This list is by no means complete, but it does give

an idea of how extensive these shipbuilding activities were over the past 30 years. Information on the building of fishery vessels (as well as any other vessel) was a state secret under the old communist regime, as was the number of persons employed. The authors made no attempt to obtain additional information since historical background will not significantly help in understanding either the present or the future activities of Ukrainian shipbuilding given the changing economic conditions.

To modernize the Ukrainian fleet of fish processing and transport vessels, the Ukrainian Government organized a conference on June 23, 1993, in Nikolayev on the Black Sea, the center for Ukrainian fishing vessel construction. Attending were fishery experts from Ukraine and the Russian Federation and reportedly also representatives of various German companies.[8]

A West German company has delivered to the Nikolaev shipyards modern cold storage and refrigeration equipment to build 16 supertrawlers. Anatolii KYNAR, a representative of the Ukrainian President in the Nikolaev region, stated at a press conference that Ukraine can earn up to $900 million a year (by the year 2000) by modernizing its shipyards and gearing them for exports.

III. CATCH AND GROUNDS

A. Fishery Catch

Before the dissolution of the USSR, statistical data on the Ukrainian fisheries catch was collected by the All-Union Research Institute for Fisheries and Oceanography (VNIRO) in Moscow, transmitted for publication to the Food and Agricultural Organization (FAO) in Rome, and incorporated into the published catch data for the Soviet Union. Each former Soviet republic, however, kept its own set of statistics, and historical data on the Ukrainian catch are probably available, but the authors have been unable to obtain them from the Ukrainian State Committee on Fisheries despite repeated requests. A limited set of January-June 1992 and 1993 catch statistics was graciously supplied by the Danish Ministry of Fisheries and FAO (appendix 5).

During the first 6 months of 1993, the Ukrainian high-seas catch amounted to 155,000 metric tons (t), almost 30 percent below the catch harvested during the same period in 1992. Despite the decreased catch in 1993, the supply of edible fishery products decreased only slightly (by 0.2 percent). In 1993, the utilization of the catch to produce edible fishery products was almost equal to the 1992 figure (110,000 t in 1992 and 109,000 t in 1993). This was possible because the reduction of harvested fish to fishmeal during January-June 1993 decreased by 40 percent (from 17,000 to 10,000 t), compared with such catch reduction during the comparable time period in 1992.

To earn hard currencies and pay licensing fees for access to foreign fishing zones, the Ukrainian marine fishing companies exported 82,000 t of the catch, or about 73 percent of the 6-month landings. Only about 1,000 t was exported to the Commonwealth of Independent States. The specific commodities exported are not known, but were most likely frozen fish. The above statistics appear to indicate that the Ukrainian people received precious little of the country's fishery catch for their own consumption; in the first half of 1993 only 26,000 t, or less than 25 percent of

the total catch, was processed and marketed to the Ukrainians.

Unfortunately, the Ukrainian statistics do not include information on the catch by species or by fishing areas. One can only presume that the Ukrainian fishermen were harvesting their catch in approximately the same areas as in previous years.

B. Fishing Grounds

Ukraine continues to fish in the world's oceans, but has recently reduced its operations considerably. Since 1991, Ukrainian fishermen no longer fish off Chile and Peru. Similarly, operations off Morocco have been suspended because Ukraine has been unable to conclude a bilateral fisheries agreement similar to the one the Soviet Union had with Morocco.[9]

Northeast Atlantic (FAO statistical area 27): In August 1993, the famous fish factory mothership, *Vostok*, the largest in the world (26,400 GRT), was anchored off Lerwick in the Shetland Islands (Scotland) to buy supplies of pelagic fish to process.[10] The *Vostok* is owned by the ANTARKTIKA company of Odessa.

Antarctica (FAO statistical area 18): Ukrainian vessels have been fishing in the Antarctic waters, mostly for krill, in the area of the Convention on Conservation of Antarctic Marine Living Resources (CCAMLR) for several years.

During the 1991/1992 fishing season (July 1, 1991 - June 30, 1992), the vessels of the Soviet Southern Fisheries Administration (YUGRYBA) operated 38 vessels in the CCAMLR area. Of this total, 9 vessels belonged to YUGRYBPOISK, 16 to the Atlantika company, 6 to the Antartika company, and 7 to KERCHRYBPROM.[11]

During the 1993 Antarctic season (January 1 - June 30), 8 Ukrainian vessels harvested fish in the Antarctic Convention Area. The Atlantika company operated 5 vessels (3 ATLANTIKs and 2 ANTARKTIDA-class stern trawlers), YUGRYBPOISK sent out 2 vessels (an ATLANTIK stern factory trawler and a ZHELEZNYAKOV medium trawler) and the Antarktika company had one medium trawler of ZHELEZNYAKOV class catching krill.[12]

Southwestern Pacific (FAO statistical area 81): Ukrainian fishermen have allegedly been fishing in a prohibited area 25 miles off the South Islands' western coast. In late 1992, one Ukrainian trawler and one Georgian trawler were seized by New Zealand fishery enforcement patrols. The Ukrainian vessel, *Aleksey Slobodchikov,* was released, but the owners had to post a bond of NZ$ 2.5 million. The fate of the Georgian trawler (*Bratya Stoyanovy*) is not known.[13]

Southeast Atlantic (FAO statistical area 47): Ukraine conducted fishing operations in the southeastern Atlantic off Africa until Namibia became independent in 1990, and subsequently declared a 200-mile Exclusive Economic Zone (EEZ). Soon after, a moratorium on fishing in Namibia's EEZ was announced. The last Ukrainian fishing effort in Namibian waters was from March to December 1991, when YUGRYBA operated 19 trawlers there.[14]

IV. FISHERIES ADMINISTRATION

Upon gaining its independence from the USSR in December 1991, the fishing industry of Ukraine, previously subordinate to the Soviet Ministry of Fisheries in Moscow, had to be reorganized to reflect the new national sovereignty. The Ukrainian Government established a State Committee on Fisheries to formulate and execute Ukrainian fishery policies. The Committee was charged with: establishing fishery relations with the other CIS countries; continuing international cooperation in fisheries; supervising the establishment of Ukrainian fishery research institutions; conducting exploratory fishing; maintaining the fishing fleet; and improving the supply of fishery products to the Ukrainian population.[15]

The control of the Ukrainian fishing industry, including the fishing fleet, had been under the central direction of the USSR Ministry of Fisheries through YUGRYBA, the Soviet Southern Fisheries Administration. In January 1992, YUGRYBA was broken up and most of the former Administration was absorbed by Ukraine, including YUGRYBA headquarters in Sevastopol. The Black Sea port of Novorossiisk, together with its fishing fleet and the fish-processing infrastructure, remained under the Russian Federation jurisdiction, while the port of Poti and its fisheries administration was taken over by the independent Georgian Republic.

V. BILATERAL AGREEMENTS

When the Soviet Union ceased to exist, Ukraine lost access to fishing grounds, such as the Barents Sea and the Sea of Okhotsk, which are now part of the Russian EEZ. Ukraine also lost access to several foreign fishing zones because the former Soviet Union's bilateral fishery access agreements were taken over by the Russian Federation, which was considered the successor state to the Soviet Union. For example, after the breakup of the USSR, Morocco decided not to negotiate a separate fisheries agreement with the Republic of Ukraine even though it did conclude a new fishery access agreement with the Russian Federation (allowing its fishermen to harvest 400,000 t of fish annually).

Bulgaria: In September 1993, Bulgaria signed a 5-year fisheries cooperation agreement with Ukraine. The agreement provides for joint efforts in the transportation of fish, the construction of fishing and fishery support vessels, and the delivery of new and spare parts and equipment. Both countries have also committed themselves to develop joint patents and standards procedures in their respective fishing industries.[16] One of the possible advantages of this agreement for the Bulgarians will be the chance to repair and modernize their 5 SIBIR-class fishery transport vessels in the Ukrainian shipyard where they were originally built. Another will be the conduct of joint fishery operations in the Antarctic.

Canada: Ukraine has been holding discussions with Canada aimed at obtaining a catch quota in the area governed by the North Atlantic Fisheries Organization (NAFO). The Ukrainians claim to have fished the 200-mile zone of Canada in the past (as part of the Soviet Union's fleet) and feel that they are entitled to have a portion of the former Soviet NAFO quota, which has been "appropriated" by the Russian Federation.[17] In 1993, the Russians gave a portion of their inherited NAFO quota to each of the 3 former Soviet

Baltic Republics, but nothing to Ukraine. At the subsequent NAFO annual meeting in October 1993, the Russian Federation obtained the 1994 catch allocation of 32,000 t, but its division among former Soviet republics has not yet been negotiated as of this writing.

Chile: Ukrainian companies are believed to be participating in Kerchval, S.A., a $4.5 million joint venture negotiated by Soviet officials. The Chilean partners are Sodimin Ltd., Serpor S.A., and Conico, S.A. The joint venture will operate two 3,000-GRT stern factory trawlers that have been transferred from the former-Soviet fleet and reflagged in Chile. Kerchval will catch, process, and market fishery products (fresh, frozen, and canned) in international markets, including those of Eastern Europe.[18]

The Chilean firm, Compañia de Inversiones also signed a joint venture agreement with the Soviet Fishermen's Union of Kerch, which is in Ukraine.[19] The authors believe that Ukrainian companies have taken over this venture, but have no specific information.

The Gambia: The U.S. Embassy in Banjul, the Gambia, transmitted in June 1993, a list of fishing licenses issued by the Gambian Government to foreign-owned vessels during the past 7 years. Among these were 3 "Kiev" vessels (in addition to 4 "Kaliningrad" vessels). It is presumed that the "Kiev" vessels belong to what is now the Ukrainian fishing fleet, but unfortunately no information is available on when they fished there, their names and catch, or whether these operations are continuing at the present time.

Mauritania: The Government of Ukraine concluded a bilateral fisheries agreement with the Mauritanian Government on 11 April 1993. The agreement concerns the development of marine fishing, scientific and technical research, training, the repair of fishery vessels, and the creation and promotion of joint fishing companies.[20]

Nigeria: In early 1992, the Odessa fishing company, Atoll, concluded a contract with the Nigerian company Lanny, creating the Lanny-Atoll fisheries joint venture. This contract was supposed to allow 3 Ukrainian vessels to fish in the Nigerian 200-mile zone, but, upon arrival in Port Harcourt, the vessels apparently encountered "red tape" which prevented them from carrying out fishing operations. The vessels and their crews of 24 Ukrainian fishermen languished in Nigeria for several months, and by June 1992, several fishermen had contracted malaria. Ukraine's lack of proper diplomatic and economic support in Nigeria meant that the sick fishermen remained there almost another 2 months before being saved by the local Russian Embassy, which arranged for the 21 sick crew members and 3 dead bodies to be flown back to Kiev.[21]

VI. FISHERY COMPANIES

In 1991, before the dissolution of the Soviet Union, the major state-owned organizations under the jurisdiction of the Soviet Southern Fisheries Administration, YUGRYBA, and located in the Soviet Socialist Republic of Ukraine, were: Antarktika, Atlantika, Kerchrybprom, Sevazrybprom, Novorossiiskrybprom, Yugrybsudoremont, Yugrybtechtsentr, Yugrybtranssbyt, and Yugrybpoisk (appendix 6).[22] It is not known whether a privatization campaign is underway to convert these

companies into private share-holding companies.

The **ANTARKTIKA** Fisheries Production Association has its roots in the Whaling Fleet Administration set up in the Black Sea port of Odessa in 1946.

In 1987, the Association ceased whaling operations and its largest whaling vessel, which was constructed in 1959, the *Sovetskaia Ukraina* (32,024 GRT), was re-equipped to catch, process, and can fish. ANTARKTIKA's huge fish factory mothership, the *Vostok* (26,400 GRT), carries her own fleet of 11 fishing vessels on board, and can produce 25,000 cans of fish daily.[23] The company's fleet comprised over 40 trawlers of various classes (in addition to the 2 large motherships), and it also owned shore-processing plants, construction facilities, and a ship repair yard; it employed 11,000 persons.[24]

In 1991, ANTARKTIKA owned 57 fishing, 12 transport, and 2 factory vessels, and employed 13,400 people.

The **ATLANTIKA** Fisheries Production Association was a result of the 1960 expansion of the Soviet fishing industry and the creation of the Sevastopol Ocean Fishing Administration, which in 1972 changed its name to ATLANTIKA. In 1991, the Association employed 8,850 people and owned over 45 fishing and 3 training vessels.

KERCHRYBPROM, which was formed in 1950 as the Kerch State-owned Base of Fishing and Marine Mammals, is one of the oldest state enterprises in the Azov/Black Sea Region. In 1991, the Association owned 33 fishing, 5 transport, and 2 floating factories, and employed 8,120 people.

YUGRYBSUDOREMONT is a commercial repair shipyard founded in 1981. It repairs large vessels and owns 3 docks, 1 in Kerch and 2 floating docks in Sevastopol.

YUGRYBTRANSSBYT, the Refrigerated Transport and Trading Administration, was formed in 1967. It is responsible for receiving fish and marine products from national and foreign vessels and transporting them to Soviet and foreign ports for processing or marketing.

YUGRYBPOISK, the Southern Fisheries Exploratory and Production Association, specializes in fish prospecting and in marine research. Established in 1939, it owned 45 vessels of various types and classes carrying many kinds of fishing gear, fish-finding equipment and instruments, and conducting several research projects in 1991. Its research vessels perform hydrographic surveys, search for new potential catch species and fishing grounds, and analyze geophysical and hydrometeorological data.

Independent fishing companies began to form in Ukraine as early as 1988. For instance, the crew of the trawler *Dneprodzerzhinsk* (ATLANTIK class of 2,654 GRT) leased a vessel from the ANTARKTIKA Association with plans to operate it independently on a contract basis. Details of the activities of this venture are not known, nor whether others have followed in the steps of this ambitious and innovative crew.[25]

Information on other independent fishing companies and on the current status of the above-mentioned state-owned enterprises is not available.

VII. OUTLOOK

The prospects for the Ukrainian fishing industry are difficult to determine because of the dearth of available information. Ukrainian fishermen suffer from some of the same problems as those in the three Baltic states (i.e., loss of access to distant-water fishing grounds, limited diplomatic representation, and the high price of diesel fuel), but are also further hampered by the relatively slow pace of economic reform in the country. Ukraine's Government, especially the parliament, is conservative and has implemented few reforms necessary to create a free market economy. It also has made little progress towards privatizing state-owned companies.

Ukraine has a substantial fishing fleet, but apparently lacks the management skills to utilize it efficiently. An official Ukrainian Government source indicated that only about 30 percent of the Ukrainian high-seas fleet was deployed in distant-water fishing operations in the summer of 1993, the height of the fishing season. The remainder was probably idle in Ukrainian ports.

SOURCES

Baseinovoe Proizvodstvennoe Ob'edinenie Yugryba. Sevastopol, 1991.

Lloyd's Register of Shipping. *Lloyd's Fleet Statistics at 31 December 1992*. London, 1993.

U.S. Navy, Office of Naval Intelligence, 29 July 1993.

ENDNOTES

1. National Technical Information Service. *Ukraine: An Economic Profile*, November 1991; BISNIS. *Commercial Overview of Ukraine*, Washington, DC, 1993.

2. BISNIS. *Commercial Overview of Ukraine*. Washington, DC, 1993. The figure of 51.9 million inhabitants is from the July 1992 census.

3. U.S. Navy, Office of Naval Intelligence, (List of reflagged fishing vessels registered in Malta, July 1993).

4. Ibid.

5. *Rybatskie Novosti* (Moscow), No. 2, January 1993.

6. Moscow Radio, 21 December 1988.

7. Soviet TV, 6 July 1988.

8. Radio Ukraine, English Broadcast, June 24, 1993.

9. Deputy Chairman of the Ukrainian State Committee on Fisheries, Personal Communication, 16 July 1993. See the section on Morocco in chapter 2 of this report for more information.

10. *Fishing News International*, September 1991.

11. See section VI for explanation of these acronyms.

12. Convention on Conservation of Antarctic Marine Living Resources (CCAMLR), *Inspection System Circular*, 27 January 1993.

13. *Fishing News International*, November 1992.

14. U.S. Embassy, Windhoek, "Fisheries of Namibia," 1991. Of these 19 vessels, 5 belonged to the Antarktika company, 5 to Atlantika company, 5 to YUGRYBPOISK, and 4 to KERCHRYBPROM.

15. *Eurofish Report*, 30 January 1992.

16. U.S. Embassy, Sofia, 29 September 1993. The most recent data indicate that the Bulgarian and Ukrainian fishing fleets will conduct joint fishing operations in the Antarctic in the CCAMLR Convention area.

17. Canadian Department of Fisheries and Oceans, Personal Communication, 20 September 1992.

18. "Sociedad Conjunta Chileano-Sovietica," *Industrias Pesqueras*, 10 August 1991, p. 35.

19. "Commercial agreement with the USSR signed," *Chile Economic Report*, November, 1990, p. 3.

20. Islamic Republic of Mauritania Radio (Nouakchott), 11 April 1993.

21. ITAR-TASS News Agency (Moscow), 24 July 1992.

22. *Baseinovoe Proizvodstvennoe Ob'edinenie Yugryba*. Sevastopol, 1991. All information in section VI, unless otherwise noted, is from this YUGRYBA brochure.

23. *Fishing News International*, September 1993. The *Vostok* is the largest fish processing vessel in the world and was the flagship of the former Soviet fishing fleet when she was constructed 22 years ago at the Admiralteiskyi Shipyard in Leningrad. This vessel has 26,000 horsepower and uses a crew of 484 to operate her processing lines.

24. Moscow Radio, 16 November 1987.

25. Moscow Radio for Seamen, 7 August 1988.

Appendix 1. Ukraine. High-seas fishing and fishery support fleet, by vessel name, class, gross registered tonnage, and country and year of construction; 1993.

Vessel name	Class	GRT	Country	Year
Achuyevskiy	ZHELEZNYAKOV	648	USSR	1976
Adaykhokh	PROMETEY MOD A	3,977	GDR	1978
Aelita	MAYAK	557	USSR	1967
Akhilleon	PROMETEY	3,933	GDR	1973
Akhtuba	ATLANTIK	2,177	GDR	1967
Al Garraf	ZHELEZNYAKOV	775	USSR	1976
Aleksandr Lavrenov	ORLENOK	1,513	GDR	1985
Aleksei Slobodchikov	PULKOVSKIY MERIDIAN	4,407	USSR	1991
Alma	ATLANTIK	2,177	GDR	1968
Alsu	ATLANTIK	2,177	GDR	1967
Amurskiy Zaliv	AMURSKIY ZALIV	12,891	France	1970
Anapskiy	ZHELEZNYAKOV	648	USSR	1976
Anastasia		726	USSR	1992
Anatoliy Gankevich	PULKOVSKIY MERIDIAN	4,407	USSR	1990
Anatoliy Khalin	NATALIYA KOVSHOVA	6,620	France	1967
Antarktida	ANTARKTIDA	6,392	USSR	1984
Apogey	PROMETEY	3,931	GDR	1974
Apsheron	ATLANTIK	2,650	GDR	1967
Arabat	PROMETEY	3,931	GDR	1975
Arneb	ZHELEZNYAKOV	649	USSR	1973
Artek	ATLANTIK	2,652	GDR	1967
Astan Kesayev	PROMETEY MOD A	3,977	GDR	1982
Ayu Dag	ATLANTIK	2,177	GDR	1967
Balta	ATLANTIK	2,652	GDR	1967
Barograf	ATLANTIK	2,211	GDR	1973
Bastion	RADUZHNYY	633	USSR	1973
Belokamensk	KRONSHTADT	2,327	USSR	1979
Beriks	MAYAK	600	USSR	1973
Besshumnyy	MIRNYY	718	USSR	1957
Biosfera	PROMETEY	3,977	GDR	1977
Bolshevo	TROPIK	1,920	GDR	1965
Boris Alekseyev	PROMETEY MOD A	3,977	GDR	1982
Bukhta Kamyshovaya	BUKHTA RUSSKAYA	6,607	USSR	1986
Bukhta Omega	BUKHTA RUSSKAYA	6,607	USSR	1987
Burevestnik	ATLANTIK	2,652	GDR	1967
Chatyr Dag	ATKANTIK	2,164	GDR	1971
Chauda	ZHELEZNYAKOV	775	USSR	1974
Cheremosh	ZHELEZNYAKOV	775	USSR	1974
Daryal	ATLANTIK	2,654	GDR	1968
Deneb	TROPIK	1,920	GDR	1964
Desyataya Pyatiletka	PULKOVSKIY MERIDAN	4,407	USSR	1990
Divnyy	MIRNYY	718	USSR	1959
Dmitry Stefanov	ORLENOK	1,513	GDR	1987
Dneprodzerzhinsk	ATLANTIK	2,654	GDR	1969
Dneprovskiy Liman	VETER	4,639	FRG	1967
Donisar	PROMETEY MOD A	3,933	GDR	1978
Dvinskiy Zaliv	AMURSKIY ZALIV	12,891	France	1971
Elektrogorsk	ZHELEZNYAKOV	775	USSR	1975
Eltigen	BASKUNCHAK	1,611	USSR	1971
Fartak	ZHELEZNYAKOV	775	USSR	1979
Fedor Korobkov	MOONZUND	7,656	GDR	1989
Fidlent	ATLANTIK	2,242	GDR	1971
Flotinspektsiya 06	MAYAK	565	USSR	1973
Foros	PROMETEY	3,980	GDR	1973
Furat	ZHELEZNYAKOV	775	USSR	1973
Gantiadi	REMBRANDT	4,020	Netherlands	1969
Garpuner Prokopenko	PROMETEY	3,931	GDR	1976
Garpuner Zarva	PROMETEY MOD A	3,977	GDR	1980
General Arshintsev	MAYAK	558	USSR	1965
General Chernyakhovskiy	PROMETEY	3,960	GDR	1973
General Ostryakov	PROMETEY	3,931	GDR	1976
General Petrov	ANTARKTIDA	6,392	USSR	1987
Geroi Adzhimushkaya	ATLANTIK	2,154	GDR	1971
Geroi Eltigena	REMBRANDT	4,199	Netherlands	1969
Geroi Kyryma	RADUZHNYY	633	USSR	1988

Appendix 1. Ukraine. Continued.

Vessel name	Class	GRT	Country	Year
Geroi Perekopa	RADUZHNYY	633	USSR	1982
Geroyevka	PROMETEY MOD A	3,977	GDR	1980
Gidrobiolog	ALPINIST MOD A	787	USSR	1978
Gidronavt	ALPINIST MOD A	788	USSR	1977
Golub Mira	MAYAK	558	USSR	1967
Gornostayevka	ZHELEZNYAKOV	775	USSR	1983
Goryn	ZHELEZNYAKOV	648	USSR	1974
Grigoriy Kovtun	PULKOVSKIY MERIDIAN	4,407	USSR	1983
Grom	PROMETEY MOD A	3,977	GDR	1982
Ignat Pavlyuchenkov	ORLENOK	1,513	GDR	1987
Ikhtiandr	MAYAKOVSKIY	2,847	USSR	1973
Ilichevsk	ATLANTIK	2,653	GDR	1968
Ilya Repin	SIBIR	5,418	USSR	1966
Imeni 61 Kommunara	SIBIR	5,418	USSR	1968
Ivan Burmistrov	MOONZUND	7,656	GDR	1987
Ivan Golubets	PULKOVSKIY MERIDIAN		USSR/Ukraine	1992
Ivan Kucherenko	MOONZUND	7,656	GDR	1988
Ivan Pribilskiy	BUKHTA RUSSKAYA	6,607	USSR	1988
Ivan Vernigorenko	ORLENOK	1,513	GDR	1985
Izmail	ATLANTIK	2,654	GDR	1969
Kacha	ZHELEZNYAKOV	775	USSR	1990
Kalimita	ZHELEZNYAKOV	775	USSR	1990
Kalper	PROMETEY MOD A	3,933	GDR	1978
Kamchatskiy Proliv	50 LET SSSR	13,083	USSR	1984
Kandalakshskiy Zaliv	AMURSKIY ZALIV	12,891	France	1971
Kantarus	ZHELEZNYAKOV	649	USSR	1973
Kapitan Bubnov	MOONZUND	7,656	Germany	1992
Kapitan Butrimov	MOONZUND	7,656	Germany	1990
Kapitan Labunets	MOONZUND	7,656	Germany	1990
Kapitan Orlikova	MOONZUND	7,656	GDR	1988
Kapitan Purgin	PROMETEY MOD A	3,977	GDR	1977
Kara Dag	ATLANTIK	2,164	GDR	1971
Karat	ZHELEZNYAKOV	775	USSR	1990
Kazantip	ATLANTIK	2,654	GDR	1970
Kekurnyy	RADUZHNYY	633	USSR	1985
Kerchenskiy Komsomolets	ZHELEZNYAKOV	775	USSR	1986
Kerchenskiy Proliv	50 LET SSSR	13,083	USSR	1978
Khersones	DAR MLODZIEZY	2,385	Poland	1988
Khronometr	ATLANTIK	2,657	GDR	1973
Kikineiz	ZHELEZNYAKOV	775	USSR	1974
Kirovograd	ATLANTIK	2,657	GDR	1969
Kodyma	ZHELEZNYAKOV	775	USSR	1974
Kometa Galeya	ZHELEZNYAKOV	775	USSR	1987
Komsomolets Sevastopolya	ATLANTIK	2,657	GDR	1969
Konstruktor Koshkin	ANTARKTIDA	6,392	USSR	1988
Krasnyy Luch	LENINSKIY LUCH	4,950	Japan	1964
Krivaya Kosa		726	USSR	1992
Krymskiy	RADUZHNYY	633	USSR	1985
Krymskiy Rabochiy	PROMETEY MOD A	3,977	GDR	1983
Kuchurgan	ZHELEZNYAKOV	775	USSR	1974
Kumachevo	ZHELEZNYAKOV	775	USSR	1984
Kurs	SKRYPLEV	4,700	Denmark	1969
Leninogorsk	ATLANTIK	2,652	GDR	1968
Lider	ZHELEZNYAKOV	775	USSR	1968
Liman	ATLANTIK	2,657	GDR	1968
Lunga	ZHELEZNYAKOV	775	USSR	1974
Lvov	ATLANTIK	2,657	GDR	1969
Lyudmila Pavlichenko	PROMETEY	3,977	GDR	1976
Maksim Khomyakov	PROMETEY MOD A	3,977	GDR	1982
Mariya Polivanova	NATALIYA KOVSHOVA	8,425	France	1966
Marlin	MAYAK	699	USSR	1964
Marshal Sudets	ANTARKTIDA	6,392	USSR	1987
Meganom	ATLANTIK	2,177	GDR	1970
Melitopol	ATLANTIK	2,177	GDR	1970
Merak	ZHELEZNYAKOV	775	USSR	1981
Meridian 1	PULKOVSKIY MERIDIAN	4,407	USSR	1991
Mezosfera	PROMETEY	3,977	GDR	1977
Mikhaylovsk	ZHELEZNYAKOV	775	USSR	1975

Appendix 1. Ukraine. Continued.

Vessel name	Class	GRT	Country	Year
Mikhaylovskiy Solovev	ZHELEZNYAKOV	775	USSR	1990
Mirzam	ZHELEZNYAKOV	775	USSR	1980
Mitridat	ATLANTIK	2,653	GDR	1969
Molodaya Gvardiya	SIBIR	5,942	USSR	1967
More Sodruzhestva	ANTARKTIDA	6,392	USSR	1986
Musson	PLAYYA KHIRON	3,227	FRG	1961
Mys Khrustalnyy	KALININGRADNEFT	4,821	Finland	1981
Mys Nadeshnyy	LUCHEGORSK	3,162	USSR	1973
Mys Ostrovskogo	KRONSHTADT	2,327	USSR	1978
Mys Pavlovskiy	KALININGRADNEFT	4,821	Finland	1982
Mys Sarych	KALININGRADNEFT	4,821	Finland	1979
Myskhako	PROMETEY	3,977	GDR	1975
Nataliya Kovshova	NATALIYA KOVSHOVA	8,425	France	1965
Nefritovyy	RADUZHNYY	633	USSR	1984
Nikolay Filchenkov	ANTARKTIDA	6,392	USSR	1986
Nikolay Pustovoytenko	PROMETEY MOD A	3,977	GDR	1982
Niolai Reshetnyak	ZHELEZNYAKOV	775	USSR	1970
Nikolayev	ATLANTIK	2,657	GDR	1970
Nina Onilova	PROMETEY	3,977	GDR	1975
Nishtun	ZHELEZNYAKOV	775	USSR	1976
Novoaleksandrovsk	ZHELEZNYAKOV	775	USSR	1978
Novoukrainka	PROMETEY MOD A	3,977	GDR	1979
Omalo	ORLENOK	1,513	GDR	1984
Onezhskiy Zaliv	AMURSKIY ZALIV	12,891	France	1970
Oreanda	ORLENOK	1,513	GDR	1984
Orkhevi	ORLENOK	1,513	GDR	1984
Orlinoye	ATLANTIK	2,657	GDR	1968
Ostropol	ORLENOK	1,513	GDR	1985
Pantikapey	MAYAK	564	USSR	1972
Pechorsk	RADUZHNYY	633	USSR	1974
Peredovik	ATLANTIK	2,652	GDR	1968
Perigey	PROMETEY	3,933	GDR	1975
Petr Buyko	ORLENOK	1,513	GDR	1985
Piatidesyatii Let Oktyabra	50 LET SSSR	13,083	USSR	1977
Pioner Volkov	SIBIR	5,431	USSR	1968
Pitsunda	ATLANTIK	2,650	GDR	1967
Pluton	ATLANTIK	2,650	GDR	1967
Poiskovik	ZHELEZNYAKOV	635	USSR	1981
Poltava	ATLANTIK	2,653	GDR	1969
Primorets	ZHELEZNYAKOV	775	USSR	1969
Professor Mesyatsev	ATLANTIK	2,242	GDR	1972
Professor Voyevodin	PROMETEY MOD A	3,977	GDR	1979
Proliv	ATLANTIK	2,650	GDR	1968
Proliv Longa	50 LET SSSR	13,083	USSR	1983
Proliv Sannikova	50 LET SSSR	13,083	USSR	1975
Pyatigorsk	ATLANTIK	2,657	GDR	1968
Qusayer	ZHELEZNYAKOV	775	USSR	1977
Redut	RADUZHNYY	633	USSR	1974
Rekord	ZHELEZNYAKOV	775	USSR	1982
Ritsa	REMBRANDT	5,025	Netherlands	1969
Rizhskiy Zaliv	AMURSKIY ZALIV	12,891	France	1970
Rybak Odessy	MOONZUND	7,656	Germany	1991
Saor-1		726	USSR	1992
Sapun Gora	ATLANTIK	2,657	GDR	1972
Semen Volkov	ZHELEZNYAKOV	775	USSR	1969
Sevastopolskaya Bukhta	BUKHTA RUSSKAYA MOD A	6,989	USSR	1989
Sevastopolskaya Rybak	ZHELEZNYAKOV	775	USSR	1970
Shamasan	ZHELEZNYAKOV	775	USSR	1979
Sharapovao	PROMETEY MOD A	3,977	GDR	1981
Shaydurovo	PROMETEY MOD A	3,977	GDR	1981
Shepetovka	PROMETEY MOD A	3,977	GDR	1981
Shkval		4,195	Sweden	1963
Sivash	ATLANTIK	2,654	GDR	1969
Slava Kerchi	MAYAK	699	USSR	1967
Sokolinoye	ATLANTIK	2,653	GDR	1969
Sovetskaya Ukraina	SOVETSKAYA UKRAINA	32,024	USSR	1959
Soyuz 3	ATLANTIK	2,652	GDR	1968
Srednyaya Kosa	ZHELEZNYAKOV	775	USSR	1983

Appendix 1. Ukraine. Continued.

Vessel name	Class	GRT	Country	Year
Stratosfera	PROMETEY	3,931	GDR	1977
Styr	ZHELEZNYAKOV	775	USSR	1974
Sugan	PROMETEY MOD A	3,977	GDR	1978
Supsa	ZHELEZNYAKOV	775	USSR	1980
Taganrog	ATLANTIK	2,653	GDR	1968
Taganrogskiy Zaliv	AMURSKIY ZALIV	12,891	France	1972
Tarkhan	ZHELEZNYAKOV	775	USSR	1974
Tarkankut	ALTAY	3,468	Finland	1972
Tavrida	ATLANTIK	2,657	GDR	1969
Tayfun	VETER	4,728	FGR	1964
Timofeyevsk	RADZIONKOW	5,366	Poland	1980
Titovyy	RADUZHNYY	633	USSR	1987
Tkvarcheli	REMBRANDT	5,019	Netherlands	1968
Troposfera	PROMETEY	3,977	GDR	1977
Truzhenik Morya	PROMETEY	3,933	GDR	1975
Tsiklon	VETER	4,698	FRG	1963
Ulan Ude	SIBIR	5,942	USSR	1969
Uragan	VETER	4,703	FRG	1964
Ussuriyskiy Zaliv	AMURSKIY ZALIV	12,891	France	1971
Van Gog	REMBRANDT	4,020	Netherlands	1965
Vasiliy Polenov	SIBIR	5,418	USSR	1966
Venera IV	ATLANTIK	2,652	GDR	1968
Vereshchagino	ZHELEZNYAKOV	775	USSR	1978
Veter	VETER	4,716	FRG	1964
Veteran	TAVRIYA	3,555	USSR	1967
Vinogradnoye	ZHELEZNYAKOV	775	USSR	1984
Vladimir Kalinin	ORLENOK	1,513	GDR	1985
Voroshilovgrad	PROMETEY	3,931	GDR	1976
Vostok	VOSTOK	26,400	USSR	1971
Vozrozhdeniye	PROMETEY MOD A	3,977	GDR	1980
Vzmore	ATLANTIK	2,652	GDR	1968
Yaroslav Iosseliani	PROMETEY MOD A	3,977	GDR	1982
Yelsk	ZHELEZNYAKOV	649	USSR	1972
Yevgeniy Polyakov	PROMETEY MOD A	3,977	GDR	1982
Yunaya Smena	ZHELEZNYAKOV	775	USSR	1985
Zab	ZHELEZNYAKOV	775	USSR	1974
Zarechensk	REMBRANDT	4,020	Netherlands	1967
Zbruch	ZHELEZNYAKOV	648	USSR	1974
Zhukovskiy	MAYAKOVSKIY	2,336	USSR	1958
Znamya Kerchi	PROMETEY	3,933	GDR	1976
Znamya Truda	PROMETEY	3,931	GDR	1975
Zodiak	REMBRANDT	4,020	Netherlands	1967
Zolotoy Kolos	ATLANTIK	2,654	GDR	1969
Zvezda Azova	PROMETEY MOD A	3,977	GDR	1981
Zvezda Chernomorya	PROMETEY MOD A	3,977	GDR	1981
Zvezda Kryma	ATLANTIK	2,154	GDR	1972
Zvezda Sevastopolya	PROMETEY MOD A	3,977	GDR	1981

TOTAL = 247 vessels TOTAL GROSS TONNAGE = 906,823 GRT

Source: U.S. Navy, Office of Naval Intelligence, 27, July 1993.

Appendix 2. Ukraine. Fishing and fishery support fleet, by class of vessel, number of vessels, total and average gross tonnage, and country and year of construction; 1951-1993.

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
AGAT	1	166	166	USSR	1984
ALPINIST MOD A	2	1,575	787	USSR	1977-78
ALTAY	1	3,468	3,468	Finland	1972
AMURSKIY ZALIV	7	90,237	12,891	France	1970-72
ANTARKTIDA	6	38,352	6,392	USSR	1984-88
ATLANTIK	46	115,968	2,336	GDR	1967-76
BALTIKA	1	108	108	USSR	1989
BASKUNCHAK	1	1,611	1,611	USSR	1971
BUKHTA RUSSKAYA	3	19,821	6,607	USSR	1986-88
BUKHTA RUSSKAYA MOD A	1	6,989	6,989	USSR	1989
DAR MLODZIEZY	1	2,385	2,385	Poland	1988
GIRULYAY	5	1,410	282	USSR	1983-85
KALININGRADNEFT	3	14,463	4,821	Finland	1979-82
KERCH	31	3,224	104	USSR	1986-90
KIROVETS	2	380	190	USSR	1987-89
KONTUR	1	264	264	GDR	1957
KRONSHTADT	2	4,654	2,327	USSR	1978-79
LEDA	1	230	230	Poland	1984
LENINSKIY LUCH	1	4,950	4,950	Japan	1964
LUCHEGORSK	1	3,162	3,162	USSR	1973
MANEVRENNYY	15	2,446	163	USSR	1975-83
MAYAK	8	4,800	600	USSR	1965-73
MAYAKOVSKIY	2	5,183	2,591	USSR	1958, 1973
MIRNYY	2	1,436	718	USSR	1957-59
MOONZUND	8	61,248	7,656	GDR	1987-91
NATALIYA KOVSHOVA	3	23,110	7,703	France	1965-67
ORLENOK	10	15,130	1,513	GDR	1984-67
PIATIDESIATILETIE SSSR	5	65,415	13,083	USSR	1975-84
PLAYYA KHIRON	1	3,227	3,227	FRG	1961
PROMETEY	19	75,051	3,950	GDR	1974-77
PROMETEY MOD A	24	95,360	4,407	GDR	1978-83
PULKOVSKIY MERIDIAN	6	22,035	3,672	USSR	1987-91
RADUZHNYY	9	5,697	633	USSR	1973-87
RADZIONKOW	1	5,366	5,366	Poland	1986
REMBRANDT	7	30,323	4,331	Netherlands	1965-70
RR 151	11	2,824	256	GDR	1951-57
SIBIR	6	33,569	5,594	USSR	1968-69
SKRYPLEV	1	4,700	4,700	Denmark	1969
SOVETSKAYA UKRAINA	1	32,024	32,024	USSR	1962
TAVRIYA	1	3,555	3,555	USSR	1967
TROPIK	2	3,840	1,920	GDR	1964-65
TSESIS	3	914	304	GDR	1956-57
TUNTSELOV 1	1	265	265	USSR	1982
VETER	5	23,484	4,696	GDR	1963-67
VOSTOK	1	26,400	26,400	USSR	1971
ZHELEZNYAKOV	47	35,399	753	USSR	1968-90
UNSPECIFIED	39	10,605			
Number of Classes:	47	TOTAL GRT = 906,823 GRT			

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

Note: The classes constructed in the USSR include those built in Ukrainian & Lithuanian shipyards.

FRG - Federal Republic of Germany
GDR - German Democratic Republic (East Germany)

Appendix 3. Ukraine. Fishing fleet reduction, by vessel name, class, gross tonnage, and year and country of construction; 1993.

Vessel name	Class	Tonnage (gross registered tons)	Year Built	Built In	New Owner
VESSELS REFLAGGED					
50 Let SSSR	50 LET SSSR	13,083	1974	USSR	Russia
Aldebaran	ZHELEZNYAKOV	775	1969	USSR	Russia
Nalle	MANEVRENNYI	164	1975	USSR	Estonia
Dnestr	DNEPR	1,360	1970	USSR	Malta
Odissey	MAYAKOVSKYI	2,788	1970	USSR	Panama
VESSELS NO LONGER ACTIVE IN FISHERIES					
Al Audem	ZHELEZNYAKOV	775	1976	USSR	*
TOTAL = 6 vessels		TOTAL GROSS TONNAGE = 18,945 GRT			

Source. U.S Navy, Office of Naval Intelligence, 29 July 1993

* Inactive as of 29 January 1993

Note: This list probably does not account for all the Ukrainian decommissioned vessels which may be as many as 20 or more.

Appendix 4. Ukraine. Fishing vessel construction in domestic shipyards; various years.

Shipyard	City	Vessel class	GRT	Vessel type
Oktyabrskii	Nikolaev	PULKOVSKII MERIDIAN	4,407	BMRT
		MAYAKOVSKYI	2,847	BMRT
Chernomorskii	Nikolaev	PULKOVSKII MERIDIAN	4,407	BMRT
		ALTAIR		
		LUCHEGORSK	2,800	BMRT
		LUCHEGORSK MOD A	2,792	BMRT
		KRONSHTADT	2,327	BMRT
		PIONER LATVII	N/A	BMRT
61 Kommunar	Nikolaev	TAVRIYA	3,447	Refrig processor
		BUKHTA RUSSKAYA	6,607	Refrig transport
		SIBIR	5,756	Refrig. transport
Okean	Nikolaev	ANTARKTIDA	6,392	BMRT
		ALTAY	3,287	
		GORIZONT	4,537	
		ALTAIR	N/A	
Nosenko	Nikolaev	MAYAKOVSKYI	2,847	BMRT
		SOVETSKAIA UKRAINA	33,154	
		TAVRIYA	3,447	
Leninskaya kuznitsa	Kiev	MAYAK-800	640	SRTM
		ALPINIST	721	SRTM
Kuibyshev	Kherson	N/A	N/A	
?	Krasnodarsk	N/A	N/A	
?	Izmail	ALTAIR	N/A	
?	?	KAMCHATSKII SHELF	8,289	Refrig transport

Source Office of International Fisheries, NMFS, NOAA, October 1993 (Information is based on files collected over the past 30 years. The list may not be complete.)

BRTM - Large stern factory and freezer trawler
SRTM - Medium freezer trawler
N/A - Not available

Appendix 5. Ukraine. High-seas fisheries catch and production; January-June 1992 and 1993.

Commodity	Jan.-June 1993	Jan.-June 1992	Change*
	(1,000 metric tons)		(percent)
FISHERIES CATCH	155.2	219.4	-29.3
PRODUCTION	120.2	135.5	-38.5
Edible products	108.8	110.1	-0.2
frozen fish	88.7	73.4	+20.8
gutted fish & fillets	8.3	-	N/A
canned fish	18.0	34.7	-48.1
smoked fish	1.4	-	N/A
salted fish	0.7	-	N/A
Non-edible products			
fishmeal	10.3	17.2	-41.2
other fodder	1.1	-	N/A
EXPORTS	82.0	-	N/A

Source: Danish Ministry of Fisheries, Personal Communication, 20 October 1993.

* Percentage of change in 1993 from 1992 figures.
N/A - Not applicable

Note: The figures for 1993 are estimates only.

Appendix 6. Ukraine. Fishery vessels, employment, and production of the main YUGRYBA companies, by company; 1991*.

Company: (location)	Vessels	Employment (persons)	Production (metric t)	Value (1988) (million Rubles)
ANTARKTIKA (Odessa)	57 fishing 12 transport 2 factories 71 TOTAL	13,400	153,000	348
ATLANTIKA (Sevastopol)	45 fishing 3 training 48 TOTAL	8,850	159,000	344
KERCHRYBPROM (Kerch)	33 fishing 5 transport 2 factories 40 TOTAL	8,120	113,200	212
YUGRYBTRANSSBYT	50 transport	6,400	-	-
YUGRYBPOISK	45 exploratory and research vessels			
SEVAZRYBPROM	10 transport	2,600	28,400	51
YUGRYBSUDOREMONT	1 dock (Kerch) 2 docks (Sevastopol)	-	-	7.7** 14.2**
TOTAL	**264 fishing and fishery support vessels and 3 docks**			
NOVOROSSIISK-RYBFLOT***	24 fishing	4,300	101,600	152
GRUZRYBPROM*** (Poti)	22 fishing	4,200	63,500	126

Source: *Baseinovoe Proizvodstvennoe Ob'edinenie Yugryba*, Sevastopol, 1991.*

* The exact date when the Southern Region's Fisheries Administration (YUGRYBA) brochure was published is only estimated. The value is for the year 1988. The vessel statistics are probably for the year 1991 when the Soviet Union still existed.
** Value of vessel repairs is for the year 1989.
*** These administrations are no longer a part of the Ukrainian fishing industry. The Novorossiisk Fishing Fleet Administration is in the Russian Federation and is responsible to its Committee on Fisheries in Moscow. The Georgian Fisheries Administration (GRUZRYBPROM) is in independent Georgia.

3.4

GEORGIA

In the former Soviet Union, the fishery fleets of all republics, including Georgia, operated as a unit divided only by the various fishing regions. This system, which prevailed for the past 40 years, was suddenly disrupted by the new political arrangements. Each independent country now has to organize its own support and transportation activities, and obtain its own fuel Georgia has no oil resources and must, therefore, buy diesel oil from Russia or other countries. Georgia has been plagued with internal political and military conflict since achieving independence which has severely damaged the country's economy. No information is available on the fate of the Georgian high-seas fleet following the invasion and occupation of its main port in Poti by rebel troops on October 10, 1993. The outlook for the Georgian fleet is bleak and it remains to be seen whether it can continue operating.

CONTENTS

I. Background 172
II. Fishing Fleet 172
III. Fishing Grounds 172
IV. Fisheries Administration 173
V. Outlook 173
Sources 174
Appendices 175

Georgia

801962 (R00088) 12 91

I. BACKGROUND

The Republic of Georgia is a small former Soviet republic with a total area of 69,700 km, or slightly larger than South Carolina, located south of Russia and north of Turkey, Armenia and Azerbaijan. Georgia has a coastline of 310 km on the Black Sea and three major ports: Poti, Batumi and Sukhumi. The population in 1992 was 5.6 million inhabitants.

The Georgian Fisheries Production Association (GRUZRYBPROM), located in Poti, was under the jurisdiction of the Southern Fisheries Administration (YUGRYBA), until the breakup of the USSR at the end of 1991, but is now an independent organization. According to a YUGRYBA brochure, GRUZRYBPROM employed 4,200 persons in 1990; in 1988, its output amounted to 63,500 tons of fishery products.

II. FISHING FLEET

Georgia currently has 35 fishing vessels on its registry (table 1 and appendix 1) with a total capacity of 47,600 gross registered tons.

The 20 vessels of less than 500 gross registered tons (GRT) are most likely engaged in the coastal fisheries in the southeastern Black Sea. There is no information on the activities of this fleet of small vessels whose average gross tonnage is only 145 tons.

The high-seas fleet consists of 13 large stern factory trawlers (BMRTs) and two medium-sized ones (appendix 2). The first BMRTs were built in the Stralsund Shipyard in the former German Democratic Republic in the late 1970s. They were of the ATLANTIK class; seven were delivered between 1967 and 1972.

The second series of German-built BMRTs was purchased by Georgian fishermen in 1980 and 1983 (appendix 2). They were of the PROMETEI class, an updated and larger version of the ATLANTIK class.

Finally, in the late 1980s, the Chernomorskii Shipyard, located in the nearby Ukrainian city of Nikolaev on the Black Sea, delivered 4 PULKOVSKII MERIDIAN-class vessels, each of which had over 4,400 gross registered tons.

Table 1. Georgia. Fishing fleet, by selected vessel capacity; 1993.

Capacity	Number	GRT	Average GRT
Under 500 GRT	20	2,910	145
Above 500 GRT	15	44,763	2,984
TOTAL	35	47,673	1,362

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

The 2 ZHELEZNYAKOV-class medium freezer trawlers were delivered in 1981 and 1982. Their deployment is not known - they might be used for exploratory and research assignments.

III. FISHING GROUNDS

Information on the fishing grounds of the Georgian high-seas fleet of 13 large stern factory trawlers (BMRTs) is not

complete. From various sources, however, the authors have been able to piece together an approximate picture of their deployment. In 1990 and 1991, the Georgian high-seas fleet was fishing in two major areas: in the Southeast Pacific off Chile and Peru and along the coasts of West Africa. The effort was split about evenly.

It appears, however, that the Pacific operations were discontinued after April 1992 when the trawler, *Kolpashevo*, left the area. In 1993, almost all of the known vessels were fishing off the African coast. Whether these vessels, on their return to the Georgian ports, also fish in the Black Sea could not be determined. An attempt to diversify their fishing operations has also been noted. For example, since February 1993, the trawler, *Akhmeta*, has been fishing in the Persian Gulf, possibly under a joint venture with one of the adjacent countries.

The operation of the BMRT, *Bratya Stoyanovy*, became known when a New Zealand fishery enforcement patrol seized the vessel sometime late in 1992 for fishing in a prohibited area 25 miles off the western coast of South Island. The vessel was fishing together with an Ukrainian stern trawler (*Aleksei Slobodchikov*) whose owner had to post a bond of $NZ 2.5 million to gain the trawler's release. The final disposition of both cases is not known, but the *Bratya Stonyanovy* continued fishing off New Zealand throughout 1993 and was reported there in October 1993.

IV. FISHERIES ADMINISTRATION

The Georgian Administration of Marine Fisheries, also known by its former acronym, GRUZRYBPROM, was organized in 1963 with headquarters in the Kolkhida section of the port city of Poti. At first, its vessels were small trawlers fishing in the nearby Black Sea. When the Soviet Union embarked on its ambitious expansion of high-seas fishing in 1953, Georgia, like all other Soviet republics, followed suit. However, it was not until 1967 that the first large stern factory trawler was purchased by the Georgian fishermen, who then entered the distant-water fisheries, primarily off Africa and in the Northwest Atlantic. The Georgian vessels were part of the YUGRYBA expeditionary fleets and were supplied with fuel, water, victuals, etc., by baseships of that fleet. YUGRYBA's vessels also helped the Georgian fleet process landed fish and transport its products from the fishing grounds.

GRUZRYBPROM was administratively responsible to the Southern Fisheries Administration in Sevastopol, a part of the Soviet Ministry of Fisheries, until December 1991, when Georgia left the Union of Soviet Socialist Republics to become an independent state.

V. OUTLOOK

The future of the Georgian fleet looks exceedingly grim. Poti, the city where the Georgian Marine Fisheries Administration was headquartered and where most of the high-seas fleet was based, was overrun by the rebel troops of the former Georgian President GAMSAKHURDIA on October 2, 1993. What happened to the fleet is not known. In the north, the port city of Sukhumi, the capital of the Abkhazian Autonomous Republic, was overrun by the

Abkhazian rebels in September 1993. The Georgian Republic thus has only one small port left -- Batumi.

Besides the internal problems associated with the civil war, Georgia's fishing industry is faced with two additional problems: fuel supplies and access to high-seas fishing grounds located within 200 miles of coastal countries. The Georgian Republic has no oil or other domestic energy sources apart from hydroelectric power. In the past, inexpensive diesel oil was available from Soviet sources, but this situation has changed radically in the last 2 years. When the Soviet Union was dissolved in December 1991, Georgia elected not to join the Commonwealth of Independent States and is thus technically a "foreign country" for Russia. As a result, it has to pay world prices for Russian diesel oil. Whether or not its Soviet-built vessels, known as high consumers of diesel oil, can be operated profitably under the circumstances, is doubtful. If one adds the fees which have to be paid by high-seas fishermen for access to the coastal grounds of other countries, the bottom line becomes a deficit. It can not be expected that the Georgian state, drained of monetary resources and facing a precipitous decline in its gross national product, will be capable of extending any subsidies to the fishing industry in the foreseeable future.

On October 8, 1993, the Government of Eduard Shevardnadze joined the Commonwealth. What significance this step will have for the future of the high-seas fleet is impossible to predict at this time.

SOURCES

Baseinovoe Proizvodstvennoe Ob'edinenie Yugryba. Sevastopol, 1991.

U.S. Navy, Office of Naval Intelligence, 29 July 1993.

Appendix 1. Georgia. Fishing fleet, by vessel name, class, gross registered tonnage, and country and year of construction; 1993.

Vessel name	Class	GRT	Country	Year
Adliya	KERCH	104	USSR	1986
Akhmeta	PROMETEI	3,977	GDR	1980
Akhun	ATLANTIK	2,177	GDR	1967
Batumi	ATLANTIK	2,654	GDR	1969
Bazaleti	PROMETEI	3,977	GDR	1983
Beshumi	MANEVRENNYY	163	USSR	1983
Bratya Stoyanovy	PULKOVSKII*	4,407	USSR	1989
Fatiko Gogitidze	MANEVRENNI	164	USSR	1975
Ilori	KERCH	104	USSR	1988
Imereti	ATLANTIK	2,177	GDR	1967
Inguri	TSESIS	305	GDR	1957
Isakovo	KARELIYA	206	USSR	1979
Khobi	KERCH	104	USSR	1987
Kolkhoznik	KERCH	104	USSR	1988
Kolpashevo	PULKOVSKII	4,407	USSR	1985
Krasnoznamensk	KARELIYA	206	USSR	1979
Maltakva	KERCH	104	USSR	1990
Mirazh	ZHELEZNYAKOV	775	USSR	1981
Ninoshvili	KERCH	104	USSR	1989
Odishi	PULKOVSKII	4,407	USSR	1983
Oktyabrskoye	ATLANTIK	2,657	GDR	1968
Paliastomi	KERCH	104	USSR	1988
Rioni	KIROVETS	190	USSR	1988
RS 300 No. 96	MANEVRENNYY	163	USSR	1977
Sakartvelo	ATLANTIK	2,657	GDR	1972
Salkhino	ATLANTIK	2,652	GDR	1967
Senaki	KERCH	104	USSR	1990
Shevardeni	KERCH	104	USSR	1989
Shprot	KERCH	104	USSR	1985
Tekhuri	ZHELEZNYAKOV	775	USSR	1982
Tsiskara	MANEVRENNYY	163	USSR	1983
Tskhaltubo	ATLANTIK	2,657	GDR	1972
Ushba	KERCH	104	USSR	1986
Vladimir Simonok	PULKOVSKII	4,407	USSR	1987
Zelenogradsk	KARELIYA	206	USSR	1979

TOTAL = 35 vessels TOTAL GROSS TONNAGE = 47,673 GRT

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

* The full name of this class is PULKOVSKII MERIDIAN.

Appendix 2. Georgia. Delivery of large stern factory trawlers, by number, class, gross tonnage, and country and year of construction; 1967-89.

Year	Number	Vessel class	GRT	Built in
1967	3	ATLANTIK	7,006	GDR
1968	1	ATLANTIK	2,657	GDR
1969	1	ATLANTIK	2,654	GDR
1972	2	ATLANTIK	5,314	GDR
1980	1	PROMETEY	3,977	GDR
1981	1	ZHELEZNYAKOV	775	USSR
1982	1	ZHELEZNYAKOV	775	USSR
1983	1	PROMETEY	3,977	GDR
	1	PULKOVSKII	4,407	USSR
1985	1	PULKOVSKII	4,407	USSR
1987	1	PULKOVSKII	4,407	USSR
1989	1	PULKOVSKII	4,407	USSR
Total	15		44,763	

Source: U.S. Navy, Office of Naval Intelligence, 29 July 1993.

GDR - German Democratic Republic (East Germany)

4.0

EASTERN EUROPE

4.1

OVERVIEW

The three major fishing countries in Eastern Europe, **Poland, Romania,** and **Bulgaria**, were associated with the former Soviet Union in the so-called 5-partite agreement (the former East Germany was the fifth member) to assist each other in developing high-seas fisheries. Although the Russian Soviet Federative Socialist Republic, now the Russian Federation, was the leading force behind the expansion into the world's oceans, all three East European countries rapidly developed their own fishing fleets. Poland also organized an important and productive network of fishery shipyards which built hundreds of vessels over the past four decades.

Romania and **Bulgaria** are both adjacent to the Black Sea and their fisheries have been traditionally based on that body of water. In the 1960s, however, they began to buy high-seas fishing and fishery support vessels from the Soviet Union, Poland, and Germany and to build an infrastructure for the processing of landed fish. Along with the increase in fishery-vessel tonnage, their marine catch grew rapidly until the late 1970s when coastal countries began to extend fishery jurisdictions to 200 nautical miles. Romanian and Bulgarian fishery administrators were unable to adapt themselves to the new conditions. As a result, their catch began to stagnate and finally decreased rapidly until their aging fleets became more of a burden than an asset.

The outlook for both industries is bleak and the lack of rapid privatization has helped to perpetuate the inbred inefficiencies of large government-owned corporations. The Bulgarian high-seas fishing company was forced into bankruptcy and will have to be bailed out by government funds to continue operations. In Romania also, the industry is still government-owned and, as in the other former communist countries, its two principal goals are: 1) to maintain the full use of the fishery fleet and the concomitant employment of its fishermen, and 2) the export of fishery products to earn hard currencies.

In **Poland,** the high-seas fishing industry has better maintained its viability and, although the catch has decreased somewhat and the high-seas fleet shrunk, it continues to maintain a powerful presence on the world oceans.

Supported by generous government subsidies, Polish shipyards, during the last four decades, built several hundred large stern factory trawlers, both for the domestic high-seas fishing companies and for export. This enabled Polish fishermen to expand their operations into the world's oceans and their continuously increasing catch to peak at 800,000 metric tons in 1975. One half of that total was contributed by distant-water fisheries.

Following the 1976-77 extension of most coastal fishery jurisdictions to 200 nautical miles, however, the problem of obtaining access to needed fishery stocks arose with unforeseen consequences. The geographical expansion of Polish fishing was terminated and the ship-building programs reduced. By the mid-1980s, the largest Polish fishery was located in the international waters of the Central Bering Sea which contributed an increasing percentage of the total catch. After an international moratorium on the Bering Sea fishery was adopted in 1992, the large fleet of Polish stern trawlers moved to the international waters of the Sea of Okhotsk, near Russia. Claiming that its Alaska pollock stocks are in danger of overfishing, the Russian Federation began to exert heavy diplomatic pressure on the Poles, along with the Koreans and the Chinese, demanding that they stop fishing in the Sea of Okhotsk. The Poles (and others) refused, stressing that a fishery in international waters is not subject to regulation by coastal states. In mid-1993, after difficult negotiations, Poland and other nations engaged in the Sea of Okhotsk pollock fishing agreed to decrease their 1993 catch by 25 percent compared to that of 1992. The future of this fishery remains uncertain and with it the future of Polish high-seas fisheries. The Okhotsk Seas fishery is the Polish high-seas fishery, contributing over 80 percent of the total high-seas catch in 1992. If it loses this fishing ground, the Polish high-seas fleet will have to rapidly find new resources, or, even more rapidly, reduce the number of its vessels.

Poland has withdrawn from the 10 or more fishing grounds where it used to fish in the late 1970s and early 1980s. Only a small fishery for krill and limited and decreasing operations around the Falkland Islands remain. These operations could not possibly support the substantial Polish stern trawler fleet of 53 large trawlers. Faced with this difficult economic and political problem, the Polish fishing companies began a forceful program of vessel reduction. During the last 7 years (1985-92), the Polish companies sold 48 vessels with a total tonnage of over 85,000 GRT to fishermen from 13 countries. The reduction program continues.

Polish high-seas fisheries are especially important because the Baltic Sea yields have been decreasing steadily. During the last 15 years, the Baltic catch had decreased by two-thirds from 330,000 tons in 1975 to 104,000 tons in 1992. There is little hope for its rapid recovery. The high-seas catch is thus important to the consumer and to the government. About 10 percent of the distant-water landings are sold on domestic markets. The remainder, sold in foreign ports or to international trading companies, brought US$ 250 million into the overall Polish foreign trade account in 1991. By 1992, these hard-currency earnings amounted to only $150 milllion.

Polish fishermen realize that they will have to adapt to the new international political and economic environment by concluding bilateral or joint venture agreements to tap into the resources within the 200-mile zones of other coastal countries. It will be necessary to pay compensation to the respective countries, yet it is believed that the economics of such fishing arrangements will be in Poland's favor and that a profit can be made by selling frozen or filleted fishery products. The Poles also hope to make arrangements whereby a portion of the catch, either in frozen blocks, or processed as fishmeal, will partially cover the costs for the license fees. The Polish fishing industry will need strong negotiating support from the Polish Ministries of Transportation and Foreign Affairs to achieve this goal.

The Socialist Federative Republic of **Yugoslavia** (SFRJ) ceased to exist in 1991 when Croatia and Slovenia declared their independence. The country's fisheries were based on the Adriatic Sea except for a brief, unsuccessful attempt in the 1970s to enter the Atlantic tuna fishery. Most of the 2,000 kilometer-long Adriatic coast is now in the Republic of Croatia. Yugoslavia has had no high-seas vessels since 1982. The newly formed states are not expected to expand into high-seas fishing in the near future.

Photo 1.--Hundreds of large stern factory trawlers were built in Polish shipyards for domestic and foreign fishing fleets.

503632 4-78 (543707)

4.2

BULGARIA

Bulgaria is adjacent to the Black Sea and its fisheries have been traditionally based on that body of water. In the 1960s, however, it began to buy high-seas fishing and fishery support vessels from the Soviet Union, Poland and Germany, and to build the infrastructure for the processing of landed fish. Along with the increase in the fishery vessel tonnage, its marine catch grew rapidly until the late 1970s when coastal countries began to extend fishery jurisdictions to 200-miles. Bulgarian fishery administrators were unable to adapt themselves to the new conditions. As a result, its catch began to stagnate and finally decrease rapidly; soon the aging fleet became more of a burden than an asset. The outlook for the Bulgarian fleet is bleak and the lack of rapid privatization helps to perpetuate the inbred inefficiency of large government-owned corporations. The Bulgarian high-seas company was forced into bankruptcy, and for it to continue operations it will have to be bailed out by government funds.

CONTENTS

I. Background 185
II. Fishing Fleet 186
A. High-seas Fleet 187
B. Fleet Reduction 188
III. High-seas Fishing Grounds and Catch 190
IV. Inland and Black Sea Fisheries 192
V. Fishing Companies 193
VI. Bilateral Fishery Agreements and Joint Ventures . 194
VII. Employment 195
VIII. Trade and Consumption of Fishery Products . . . 196
IX. Shipyards 196
X. Outlook 196
Sources 197
Endnotes 198
Appendices 200

I. BACKGROUND

The Republic of Bulgaria, a country with a population of 9 million, is sandwiched between Romania in the North, Turkey and Greece in the South, and Serbia and Macedonia in the West. Bulgaria also borders on the Black Sea in the east. The country has no ocean coast; its Black Sea coastline runs for 378 kilometers. To reach the Atlantic, the Bulgarian vessels must transit the Straits of Bosphorus and Gibraltar.

The gross value of the 1990 fisheries production was estimated at US$ 20 million[1]; a large portion (US$ 17.2 million) of this total was exported. Fishery imports, mostly fishmeal, amounted to US$ 2.5 million in

1990.[2] The fisheries catch has been declining substantially throughout the 1990s, however, and this trend is expected to continue, leading to a decrease in fishery production and exports.[3]

Traditional coastal fishing in the Black Sea continued after World War II, but most private fishery companies were nationalized after a People's Republic was proclaimed in September 1946. Since all the riparian states on the southern Danube River (Bulgaria, Romania, and Yugoslavia) were under communist control, it was only natural that they concluded an agreement on cooperation in the Danube fisheries in January 1958. The Soviet Union, as the paramount political influence in Eastern Europe, joined as a signatory. A year later, the USSR, Bulgaria, and Romania concluded an agreement on the Black Sea fisheries and established a Commission regulating them.

Having thus established a close relationship in fisheries, Bulgaria watched with considerable interest the Soviet expansion into the world's oceans which began after Stalin's death in 1953. In 1962, the Soviet Union, Poland, and the German Democratic Republic concluded a multilateral agreement on mutual cooperation in the development of high-seas fisheries and all three countries began to construct large stern factory trawlers at a rapid pace, copying the prototype (Fairtry) whose design was purchased by the Soviets from a United Kingdom shipyard. Bulgaria was initially not a member of the so-called "tripartite fisheries agreement," but its officials attended as observers and were impressed by the rapid progress the three countries were making.

In 1967, Bulgaria purchased its first large trawler of the TROPIK class (2,600 gross tons) from an East German shipyard and entered the distant-water fisheries (appendix 1).

Table 1. Bulgaria. Fishing fleet, by selected vessel capacity; 1993.

Capacity	Number	GRT	Average GRT
Under 500 GRT	10	1,262	126
Above 500 GRT	24	79,176	3,299
TOTAL	34	80,438	2,366

Source: U.S. Navy, Office of Naval Intelligence, 26 July 1993.

After a meteoric expansion of its high-seas fisheries during the late 1960s and 1970s, which brought the marine catch from zero to 167,097 metric tons (t) in 1976, Bulgaria's fishing industry began to stagnate following the extensions to 200 nautical miles of the fishing zones by a majority of coastal nations. Bulgaria's fishing operations had to be curtailed off the United States, Canada, and the European Community; only off Africa and South America were fishing grounds still accessible. The catch stagnated at about 100,000 t for the past decade, but declined precipitously in 1990 and 1991 to about half of that amount.

II. FISHING FLEET

In July 1993, the Bulgarian fishing fleet numbered 34 vessels with a total gross tonnage of 80,400 tons. (For a complete list of these vessels showing their names, class, gross registered tonnage, and country and year built, see appendix 2). The high-seas fleet represents 98 percent of the Bulgarian fishery

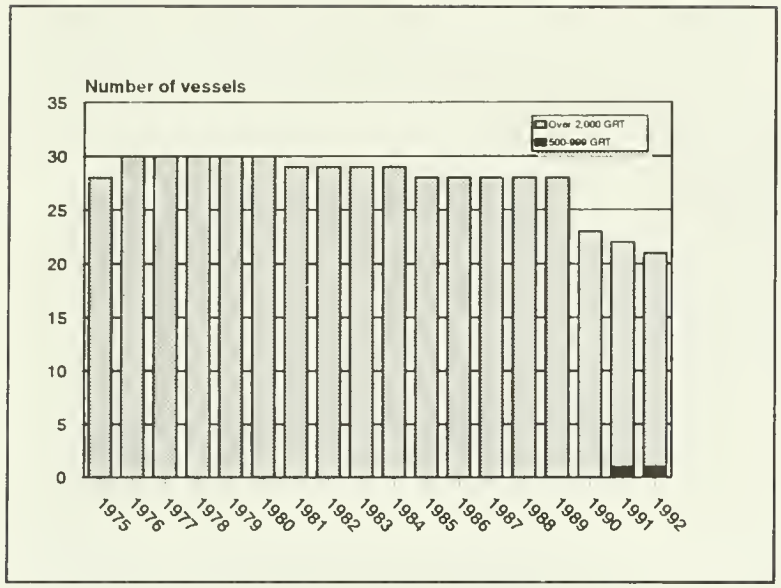


Figure 1. Bulgaria. Number of high-seas fishing vessels, ranked by tonnage, 1975-92.

gross tonnage, even though it only has 24 units.

The 10 vessels having less than 500 gross tons are actually small coastal vessels with slightly over 100 gross tons each. Half of them were purchased recently (1990) from the former Soviet Union; the other half is much older (4 cutters were bought from the former East Germany in 1965). All 10 most likely fish in the Black Sea, but detailed information on their deployment is lacking.

The 24 vessels which have over 500 gross tons are divided into 2 groups: one, composed of 19 large stern factory trawlers, conducts fishery operations on the high-seas; the second, consisting of 5 large base ships, supports the fishing operations of the first group. In fact, each of these vessels has over 2,000 gross tons (appendix 2).

The data obtained from Lloyd's of London (appendix 3) agree with those from the U.S. Navy, except that for 1992, Lloyd's lists 21 trawlers rather than the 19 listed in Office of Naval Iintelligence's compilation of July 1993.

The composition of the Bulgarian high-seas fishing fleet has barely changed for almost 2 decades (figure 1), but beginning in 1990, the reduction of 7 vessels is readily apparent. The number of fishery support vessels, however, has not changed at all (figure 2). Fluctuations in the gross registered tonnage of the high-seas fleet over the past 17 years are given in appendix 3.

A. High-seas Fleet

In March 1964, Bulgaria purchased its first large stern factory trawler of the TROPIK class and entered the high-seas fisheries (appendix 1). This purchase was followed by

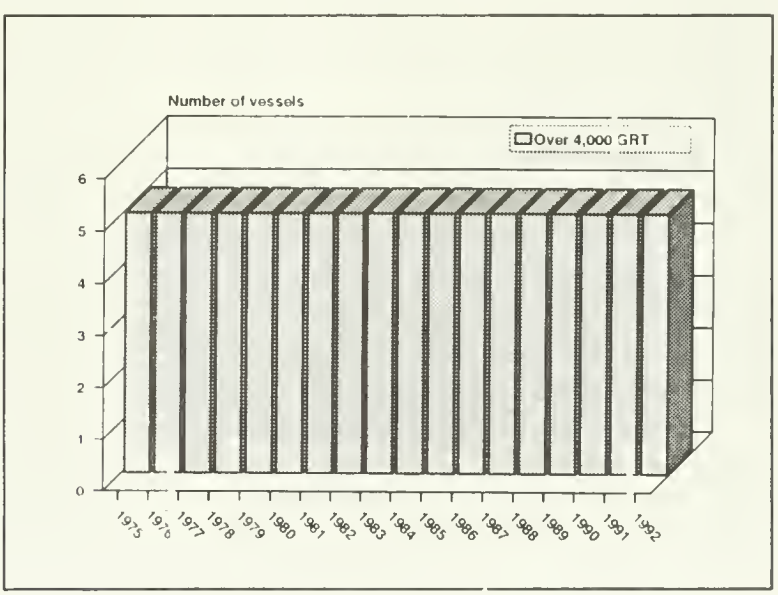


Figure 2.Bulgaria.Number of high-seas fishery support vessels; 1975-92.

4 more TROPIKs, in the next two years, and 3 MAYAKOVSKII-class large stern factory trawlers in 1967.

The next year, the Bulgarians again shopped in the former German Democratic Republic where they ordered 3 modern ATLANTIK-class vessels from the Stralsund shipyard (which began to build this type of vessel serially in the 1960s). The vessels impressed the Bulgarians -- reportedly they were more advanced than the Soviet-built MAYAKOVSKIIs -- and, during the next 3 years, another 8 ATLANTIKs were bought. By the end of 1971, Bulgaria's high-seas trawler fleet numbered 20 Soviet and East German-built units.

During the same period, the Bulgarian Government also purchased 6 giant (6,000 GRT), SIBIR-class baseships from the Soviet Union to support the far-flung distant-water operations of its factory trawlers.

The final phase of the Bulgarian high-seas fleet expansion took place in 1974-75, when Bulgaria purchased another 9 stern factory trawlers from Polish shipyards. This was an ill-timed move as, a year later, most of the world's coastal countries, including several off whose coasts Bulgarians fished heavily (Canada, the United States, the European Community countries) extended their fishery jurisdictions to 200 nautical miles. An additional negative impact was caused by the policies of the Bulgarian communists under the leadership of General Secretary, Todor Zhivkov. Instead of allowing the profits of the Bulgarian high-seas fisheries to be reinvested in the modernization and renovation of the high-seas fleet, they skimmed the accumulated funds and used them for other purposes. A complete account of this trend, which became critical in 1988, has not yet been fully disclosed, but it is known that the Bulgarian high-seas fishing company, OKEANSKI RIBOLOV, had to borrow money to make repairs on its vessels and was charged usurious interest rates on these loans.[4]

In July 1993, the 24-vessel fleet of OKEANSKI RIBOLOV, which conducts all of Bulgaria's high-seas fishing operations, consisted of 17 trawlers and 7 support vessels (appendix 2). This fleet is composed of: 6 ATLANTIK class large stern factory trawlers built in the former East Germany (about 20 years old); 9 KALMAR class trawlers built in Poland (about 16 years old-photo 1); 1 PULKOVSKII MERIDIAN class trawler built in the former Soviet Union (about 4 years old); 5 SIBIR class refrigerated transport vessels (all are over 20 years old); and 2 converted MAYAKOVSKII class trawlers which now serve as transport and support vessels.[5] The utilization of the ZHELEZNYAKOV-class vessel is unknown; judging from its size, it may be used for exploratory fishing.

The ATLANTIK, KALMAR, and PULKOVSKII MERIDIAN-class stern factory trawlers are equipped to fish for both demersal and pelagic fish by using bottom or mid-water trawls. They can process between 70 and 120 tons of landed fish each 24 hours. The catch is sorted, gutted and headed, filleted, frozen, and packed. The final product of whole or processed frozen fish blocks is packed in cartons (two or three blocks per carton). The offal is reduced to fishmeal.[6]

B. Fleet Reduction

The Bulgarian Government purchased a total of 36 high-seas vessels during the 1964-

Photo 1. Bulgaria. Bulgaria ordered 9 KALMAR-class stern factory trawlers (2,450GRT) from a Polish shipyard in the mid-1970s.

90 period (appendix 1). Currently, the fishing fleet consists of only 24 such vessels. (19 trawlers, supported by 5 large fishery transports and baseships). The 12 vessels which are no longer in the Bulgarian registry were mostly scrapped. They were 5 TROPIK class,[7] 1 MAYAKOVSKII class,[8] and 6 ATLANTIK class stern factory trawlers.[9] Their total tonnage amounted to 32,312 GRT, or about 40 percent of the current Bulgarian high-seas fleet tonnage. The stern factory trawlers of the ATLANTIK, KALMAR, and MAYAKOVSKII class still in the Bulgarian registry are by now all about 18-25 years old, but they are well-maintained and will continue their high-seas operations in the foreseeable future. One of Bulgaria's high-seas vessels, an ATLANTIK-class stern factory trawler, the *Kondor*, sank in April 1991 during a fishing trip in the Atlantic Ocean.[10] It is therefore no longer listed in appendix 1.

The 5 large refrigerated transports and baseships of the SIBIR class (photo 2) are also about 20 years old, but will undergo modernization and continue to support the Bulgarian high-seas fleet.

To obtain much needed hard currency, OKEANSKI RIBOLOV plans to sell its most

Photo 2. Bulgaria. Large refrigerated transports of the SIBIR class (5,000GRT) built in the USSR, carry fishery products to Bulgarian home ports.

modern stern factory trawler, the *Feniks*, built in 1988 in an Ukrainian shipyard.

III. HIGH-SEAS CATCH AND GROUNDS

Bulgaria's fishing industry is dominated by high-seas fisheries (appendix 5). The Bulgarian fisheries began to develop in the early 1960s when the communist countries, inspired by the Soviet example, planned a major expansion into the world's oceans to provide the domestic population with highly-prized Atlantic species, and create additional occupations in an economic system where full employment was peremptory. The expansion was facilitated by the fact that most countries at that time claimed only the traditional 3-mile fishery limits. Since most of the demersal fishery resources, and many pelagics, dwell on the continental shelves, the extensions of fishery limits to 12 miles in the late 1960s, and to 200 nautical miles from 1975-77, spelled trouble for the future of Bulgarian high-seas fishing operations. The country's fishery officials and diplomats had to secure access to the fishing grounds where the Bulgarian fishermen had previously fished freely. This access, was increasingly denied over the years by the developed countries

which wanted these fisheries for their own citizens and by the developing countries which demanded payment for the resources. The loss of access to traditional distant-water grounds has meant the curtailment of high-seas operations on some fishing grounds and a significant decline in the catch.

In 1991, Bulgaria's high-seas catch was 38,500 t, less than half of the 1989 catch of 81,300 tons. The Bulgarian high-seas catch has been decreasing since 1975, but the precipitous declines in 1990 and 1991 were largely caused by a reduced fishing effort off the coast of West and Southwest Africa. In 1992, the total catch will probably be further reduced because the Falkland Islands fisheries catch has been more than halved (appendix 5).

The high-seas catch has always represented over three-fourths of the total Bulgarian catch, but its contribution has decreased from 90 percent of the total in 1975 to 77 percent in 1991.

In recent years, Bulgaria's high-seas fleet has operated mainly in the Southeast and Southwest Atlantic (FAO statistical areas 47 and 41, respectively). These operations have yielded an average of between 80,000-90,000 metric tons (t) of fish annually, principally Cape horse mackerel, but also blue whiting, grenadier, and squid.[11]

Northwest Atlantic (FAO statistical area 21): In the northwestern Atlantic off the Canadian and United States coasts, the Bulgarian fishery was reduced to zero by 1985 following the extension of fishery jurisdictions to 200 miles by these two countries. Recently, however, Bulgaria received a small catch allocation of about 2,000 t per year by the North Atlantic Fisheries Organization (NAFO).

Northeast Atlantic (FAO area 27): The Bulgarian fishing effort in this region declined after the European Community declared its 200-mile EEZ in 1977. A small operation is maintained off the United Kingdom where Bulgarian trawlers are permitted to fish for Atlantic mackerel and conduct klondyking operations. The catch, however, is small; in 1991 it was about 4,000 tons.

Central Eastern Atlantic (FAO area 34): The fishing grounds off West Africa supplied more than half of the total Bulgarian fisheries catch as late as 1980. By 1985, however, the Bulgarians have discontinued fishing in this area.

Southwest Atlantic (FAO area 41): In the early 1980s, most fishing took place off Argentina and the Falkland Islands. When the Falkland Islands Government began to regulate foreign fisheries in 1987, the Bulgarians, imitating the Soviets, refused to apply for fishing licenses. In 1989, they reversed this position and began to purchase licenses and renew fishing operations off the Falklands.

In the second fishing season[12] of 1989, the Falklands Government issued licenses to 9 large Bulgarian stern factory trawlers. They landed 9,000 tons of fish, or about 1,000 t per vessel; the harvest of blue whiting predominated (5,800 t).

In 1990, they expanded their operations to 14 vessels and more than doubled the total catch to 22,100 t (or about 1,600 t per vessel), fishing both in the first and the second season.

In 1991, the Bulgarians deployed just 8 vessels and fished only in the second season when the area is open for finfish operations,

but is closed for squid fishing. Nevertheless, the Bulgarian fishermen landed almost the same amount of fish as the previous year (appendix 6).

In 1992, only 7 Bulgarian trawlers were granted licenses by the Falkland Islands Government. It is not known how many fishing days they spent on the grounds, but their catch was dismal; less than 9,000 tons.

In 1993, the catch may be even smaller, as only 2 vessels have been issued licenses for the squid fisheries. Bulgarians have not fished for squid in the past (except for a small amount in 1990) and the entry into this fishery is probably an indication of their desire to earn foreign currencies. It is believed that for the second season of 1993, the Falklands may authorize 5 trawlers to fish for finfish, the same number as in 1992.

Southeastern Atlantic (FAO area 47): The fishing grounds off Angola, Namibia, and the Republic of South Africa have been the most important fishing area of the Bulgarian industry from 1985 to 1989. The traditional catch of Bulgarian fishermen in that area amounted to about 43,000-45,000 tons per year, or more than one half of the total high-seas catch (appendix 5). In 1990 and 1991, however, this catch decreased sharply (by 80 percent) to only 8,500 t following the independence of Namibia and the subsequent moratorium on foreign fishing in its newly declared 200-mile zone. Fishing in this area is regulated by the International Commission for the Southeastern Atlantic Fisheries (ICSEAF), of which Bulgaria is a member.

Southwest Pacific: In the early 1980s, the Bulgarians also fished off the coasts of Chile and Peru. The catch peaked at 25,000 tons in 1984, but was discontinued by 1986. Limited fishing was resumed in 1990 and 1991, yielding a small amount (1,700 t) of fish to what appears to be one stern factory trawler.

IV. INLAND & BLACK SEA FISHERIES

Inland fisheries catch (appendix 5) comes mostly from fish farming and reservoirs. River fishing is negligible. The fishery increased somewhat in the middle of the 1980s, peaking in 1986 at 14,100 tons, but has lately decreased to about 9,000 tons. It is one of the major providers of fresh fish to the population.

The resources of the Black Sea (FAO statistical area 37) are extremely depleted and increasingly polluted; Bulgaria's recent levels of fisheries catch from these waters are less than a third of those harvested in the early 1980s and amounted to less than 3,000 tons in 1990/1991 (appendix 5). In recent years, the sprat fishery and trials of mussel culture could not be sustained because of pollution. In the absence of improvement of the Black Sea marine environment, the prospects for increased production in this fishery are unpromising. Serious measures must be implemented, both nationally and regionally, to manage Black Sea fisheries and to protect the stocks from further degradation, especially by working to reduce the discharge of pollutants into the Black Sea.[13]

Along with the 10 trawlers of over 100 GRT mentioned in table 1 on page 2, a number of other, even smaller Bulgarian vessels also fish in the Black Sea from the ports of Varna, Nesebur, Sozopol and Burgas.

V. FISHING COMPANIES

From its inception, the Bulgarian state heavily subsidized high-seas fishing operations, making it possible for the state-owned marine fisheries company, RIBNO STOPANSTVO, to expand and continue operating. From 1987-1990, fishery subsidies amounted to 112 million leva, or $18.7 million.[14] After the communist regime was defeated in 1990 elections and free market principles introduced into the Bulgarian economy, RIBNO STOPANSTVO was declared bankrupt, and was forced to restructure itself in an attempt to become profitable.[15]

At the end of 1990, RIBNO STOPANSTVO was divided into six state-owned fishing companies. The largest, the OKEANSKI RIBOLOV (Ocean Fisheries) Company, engages in high-seas fisheries. These companies face serious shortages of capital needed to upgrade and modernize their fleets. During the last few years, the Bulgarian fishing industry has been going through a difficult period of transition and adjustment caused partly by the loss of access to high-seas fishing grounds, and partly by the introduction of the market economy.[16]

In 1991, OKEANSKI RIBOLOV experienced a major financial crisis. The increasing costs of operating its high-seas fleet (higher licensing fees, costlier diesel fuel, higher maintenance and repair costs abroad, etc.) and mismanagement (the company suffered a loss of 34 million leva in its sales department during January-July 1991) brought the company to the brink of bankruptcy. As in the past, the company's management requested that the Bulgarian Government extend a subsidy of 131 million leva to balance its books. The Government appointed a commission chaired by the Deputy Prime Minister, LUZHEV, to determine how the company, which employed about 2,000 persons, could be saved.

According to the Bulgarian media[17], the Commission advised that bilateral agreements be concluded with the (then) Soviet Union, Canada, the United States, Namibia, Angola, and the Falkland Islands to secure access to fishery resources. Such a solution was illusory as Canada and the United States no longer permitted foreign fishing and Namibia declared a fishing moratorium in its 200-mile zone. It was also noted that while domestic subsidies in leva made it possible for the company to earn hard currency, the latter failed to "find its way into the Bulgarian treasury".

According to the U.S. Embassy in Sofia, the company concluded its 1992 business year with losses totaling 79.2 million leva (US$ 2.8 million). The losses continued in 1993, when, during the first quarter, the company lost 24.4 million leva. Faced with a shortage of available hard currency, an aging fleet, mounting debts, and decreasing domestic demand for fishery products caused by the difficult economic times in Bulgaria, OKEANSKI RIBOLOV recently declared bankruptcy. There was some hope that profitable joint ventures or infusion of foreign capital might prevent the liquidation of the company, but it now appears that any profits from joint ventures will not be sufficient to keep the company operating. The company's management hopes that it will be restructured and privatized as a limited liability company and shares will reportedly be offered for sale within the year.

VI. BILATERAL AGREEMENTS & JOINT VENTURES

Argentina: Bulgaria deployed several large stern factory trawlers on the Patagonian Shelf in the Southwest Atlantic off Argentina along with the much larger Soviet fleet in 1967-77. The Bulgarian fleet was withdrawn, however, after Argentina declared a 200-mile zone in January 1967. Violent encounters between the Argentine Navy and Bulgarian fishermen hastened the withdrawal of the Bulgarian fleet.[18] Bulgaria resumed fishing in the region in 1984 after the Falklands conflict forced the Argentine Navy to curtail its fishery enforcement patrols. Most of the Bulgarian fishing during 1984 and 1985 probably took place off the Falklands or off Argentina, but outside its 200-mile zone. The catch was primarily southern blue whiting and squid.

In 1986, Argentina signed a bilateral fisheries agreement with Bulgaria permitting the Bulgarians access to the Argentine EEZ south of the 46th parallel; the Bulgarians were limited to the use of 6 vessels and a catch allocation of 60,000 t of fish. The Bulgarians never exploited the agreement to its full extent.[19] For instance, in 1988 they caught only 42,000 t of fish.

The Argentines reported major difficulties in their fishery relations with the Bulgarians in the late 1980s, charging specifically that the Bulgarians delayed buying semi-manufactured fishery products from Argentine shore processors as they were required to do under the terms of the agreement.[20] In 1989, when the bilateral fisheries agreement expired, the Argentine Government declined to renew it in response to Bulgarian noncompliance with its terms.[21] The Bulgarians have, however, continued to fish in the southwestern Atlantic, but outside Argentina's 200-mile zone. Their 1992 catch in that area is less than 25 percent (9,000 t) of what it used to be only 4 years ago (appendix 5).

Chile: Bulgarian fishermen conducted some fishing operations off Chile during the 1970s and 1980s. This effort was deployed mostly outside Chile's 200-mile fisheries zone; the catch was jack mackerel.

Falklands: The United Kingdom began to manage fisheries within the 150-mile Falkland Islands interim Conservation Zone (FICA) in 1987, and authorized the Falkland Islands government to begin licensing foreign fishermen. Initially, the Bulgarians, following the Soviet lead, did not purchase licenses to fish off the Falklands. After the Bulgarian communist government fell in 1989, however, Bulgarian fishermen began to buy licenses and fish off the Falklands.

Russia/Former USSR: Bulgaria concluded three bilateral agreements with the former Soviet Union. The most important was the April 23, 1973, agreement on cooperation in the development of high-seas fishing (appendix 7). The two countries agreed to mutually support each other's high-seas fleets by supplying fuel and water, and to transport fishery products with each other's refrigerated transports. It was also agreed to cooperate in fisheries research, and training of fishery specialists, and to coordinate both countries' positions in international fishery organizations.

The second agreement, concluded in October 1978, gave the Bulgarians the right to fish inside the 200-mile zone of the USSR in the Barents Sea under Soviet catch quotas and regulations.

The third agreement, concluded in April 1979, concerned the mutual catch of Black Sea anchovy and sprats in the territorial waters of both countries.

According to Bulgarian officials, the agreements with the former USSR are being renegotiated with the Russian Federation, the successor state of the USSR. No final draft of an agreement has yet been concluded.[22]

In June 1990, a Soviet-Bulgarian joint venture (J/V), SOZOPOL-Kamchatka, was created in the Russian Far Eastern city of Petropavlovsk-Kamchatka. The founders of the J/V were RIBNO STOPANSTVO (its successor in the venture is OKEANSKI RIBOLOV), and the Russian fisheries association, KAMCHATRYBPROM. The J/V leases the Bulgarian trawler *Feniks* to process fish delivered by Kamchatkan fishermen.[23] In May 1993, the vessel was undergoing maintenance and minor repairs in the shipyard docks of Petropavlovsk-Kamchatskii.[24] It is rumored that the Bulgarians plan to sell the vessel to a Kamchatka company for hard currency.

Ukraine: In September 1993, Bulgaria signed a 5-year fisheries cooperation agreement with Ukraine. The agreement provides for joint efforts in the transportation of fish, the construction of fishing and fishery support vessels, and the delivery of new and spare equipment. The 2 countries have also committed themselves to develop joint patents and standardization in their respective fishing industries.[25] The authors believe that this agreement is similar to the one concluded in 1973 with the Soviet Union. Furthermore, it is believed that the pending agreement with the Russian Federation will be similar. One of the potential advantages of this agreement will be that the Bulgarians will be able to repair and modernize its SIBIR-class fishery transport vessels in the Ukrainian shipyard where they were originally built.

United Kingdom: In June 1993, OKEANSKI RIBOLOV signed a preliminary joint venture agreement for fishing and trading with the British company ABBOTSWELL. The British will provide the capital (US$ 2.5 million) for the project, while Bulgaria will provide 10 stern factory trawlers with Bulgarian crews to fish off the Falkland Islands and Scotland.[26] If successful, this joint venture will secure the deployment of one half of the Bulgarian high-seas fishing fleet and employ 500 Bulgarian fishermen. This is the second agreement that OKEANSKI RIBOLOV has signed with this British company. In October 1992, the J/V negotiated with ABBOTSWELL permitted 4 Bulgarian trawlers to fish off the coast of Greenland. This fishery continued in 1993.[27]

United States: Bulgaria signed a 5-year Governing International Fisheries Agreement (GIFA) with the United States which lasted from February 1977 to July 1983; it was then extended for another 5 years until 1988. The Bulgarian fishermen, however, were not allocated any catch quotas, nor did they conclude any joint ventures with U.S. companies, and the GIFA expired on July 1, 1988.[28]

VII. EMPLOYMENT

In the Bulgarian high-seas fishing fleet, an estimated 1,200 fishermen are working aboard the 19 stern factory trawlers, while about 600 persons are employed on the 5 support baseships and about 200 persons constitute administrative and other support personnel. This total is less than half of the 5,600

employees which the company had in 1989, at the end of the Zhivkov regime.[29]

In April 1991, FAO reported the total employment in the primary (fishermen) sector of the fishing industry at 7,100 persons. The high-seas fleet represented about 5,000 of this total, while the employment in the Black Sea fisheries was estimated at about 2,000 persons.[30]

The FAO source has no information on how many employees there may be in the secondary (fish processing) sector.

The rapid decrease in employment in the fishing sector is having a severe effect on the local economies of Burgas and Varna, the two cities where the fishing industry is concentrated. An additional problem is that many capable Bulgarian fishing captains and officers have accepted employment on vessels owned by other countries.[31]

VIII. TRADE AND CONSUMPTION

Bulgaria exported 47,000 metric tons of fishery products in 1989, about one half of its fisheries catch (appendix 8). The rest was sold on domestic markets. This is the same ratio as in 1985, but because fishery imports have dwindled to almost nothing in 1989, the available supply of fishery products per person decreased about 30 percent to only 6.2 kg from 8.7 kg in 1985.

The large production of fishmeal in 1985 (44,400 tons, according to FAO[32]) became non-existent in 1989. The importation of this commodity also decreased greatly from 146,000 t in 1985 to only 81,000 t in 1989, or by 55 percent. The presumed cause is a lack of foreign currencies. The effect on the local cattle and hog industries could be severe. More recent information is not available.

IX. SHIPYARDS

In the late 1960s and early 1970s, the Ilya Boyadzhiev shipyard in Burgas on the Black Sea coast constructed a series of small refrigerated trawlers of the SHUSHVE class; the first such vessel was launched in February 1968. Several of these vessels were constructed under contract for the former Soviet fishing fleets to be used in the North and Baltic Seas.[33] Details on the current activities of Bulgarian shipyards building fishery vessels, their names or locations, are not known.

X. OUTLOOK

The outlook for the Bulgarian high-seas fishing industry is bleak. The lack of rapid privatization after the demise of the communist regime prolonged the inbred inefficiency of the large government-owned corporation. The high-seas fishing company, OKEANSKI RIBOLOV, has been forced into bankruptcy and there is little hope that the current Bulgarian Government will bail it out. The fisheries catch has been reduced to a point where its proceeds cannot assure the profitability of high-seas operations. Recently concluded joint ventures with foreign companies have been profitable, but they have not been sufficient to enable the company to pay off its large debt and restructure itself into a streamlined private enterprise. Since much of the Bulgarian high-seas catch has traditionally been sold abroad for foreign currencies, the effect of the diminishing catch on the domestic supply of fishery products is not particularly severe. Bulgaria has

previously supplied its citizens with imported fish. However, because of the decreasing value of the leva and the discontinuation of government subsidies for foreign fishery imports, prices for imported fish have risen to the point where the average Bulgarian can no longer afford it. The 1989 import level of almost 30,000 t of fishery products was reduced to only 6,000 t in 1992.

In addition, Bulgaria has no oil resources and its high-seas fleet would have been hard hit by the oil crises of 1973 and 1979 without the cheap deliveries of oil from the former Soviet Union. However, with the dissolution of the USSR, Russian oil prices have been increasing steadily and are now approaching world levels; the payment is now demanded in hard currencies. The need to buy expensive diesel fuel diminishes the profitability of the fleet and will have a negative impact even if the state-owned fleet is privatized since the fuel costs may represent as much as 40-50 percent of the revenues earned from the sale of the catch.

The future of the Bulgarian high-seas fisheries is in jeopardy. It cannot be excluded that, faced with large operational losses in the past, the Bulgarian Government will abandon distant-water fisheries and liquidate its fleet.

SOURCES

FAO. Fishery Country Profile. *Bulgaria*. Rome, April 1991.

FAO. *Yearbook of Fishery Statistics: Catches and Landings*. Rome, various years.

Lloyd's Register of Shipping. *Lloyd's Register of Shipping Statistical Tables*. London, various years.

U.S. Embassy, Sofia. Personal Communication. 29 September 1993.

U.S. Navy, Office of Naval Intelligence, 26 July 1993.

ENDNOTES

1. This was equivalent to 120 million leva at the exchange rate prevailing at the time of 6 Bulgarian leva to 1 U.S. dollar.

2. FAO, Fishery Country Profile. *Bulgaria*, Rome, April 1991.

3. T.K. Ivanov, "Bulgarian High Sea Fishery: Present and Future." Published in *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia,* (Agra Europe, Ltd. London), 1993, p. 13.

4. T.K. Ivanov, "Bulgarian High Sea Fishery: Present and Future," *Op. cit.*

5. FAO, Personal Communication, 21 July 1993; U.S. Navy, Office of Naval Intelligence (ONI), 26 July 1993.

6. FAO, Personal Communication, 21 July 1993.

7. The 5 TROPIK class trawlers were scrapped in Varna, Bulgaria, and in Pakistan.

8. The MAYAKOVSKII-class stern trawler (*Lebed*) was scrapped in April 1986 at Eleisis, Greece.

9. The disposition of the 6 ATLANTIK-class stern trawlers is not known.

10. U.S. Embassy, Sofia, 29 September 1993. The *Kondor* reportedly sank after hitting a rock. The location of the sinking in the Atlantic was not precisely identified, but it may have been off West Africa where the vessel was fishing on its prior trips.

11. FAO, Fishery Country Profile. *Bulgaria*, Rome, April 1991.

12. The "second season" begins in June of each year and lasts until the end of November.

13. FAO, Fishery Country Profile. *Bulgaria*, Rome, April 1991.

14. The 1990 exchange rate was US$ 1 = 6 Bulgarian leva.

15. *Duma* (Sofia), 21 October 1991, pp. 1-2.

16. FAO, Fishery Country Profile. *Bulgaria*, Rome, April 1991.

17. *Duma* (Sofia), 21 October 1991, pp. 1-2.

18. "Shelled Trawler Rescued," *Japan Times*, 4 October 1977; "Argentina Opens Fire on Two Fishing Vessels," *Japan Times*, 2 October 1977.

19. U.S. Embassy, Buenos Aires, 22 August 1993.

20. "Luz Rojo Para el Acuerdo Búlgaro," *Redes*, No. 42, 1989.

21. "Fishing Agreement with Bulgaria Suspended," Buenos Aires DYN, 2 March 1989.

22. U.S. Embassy, Sofia, 29 September 1993. The 1979 agreement is apparently no longer valid since the Bulgarians are no longer permitted to fish inside the Russian 200-mile zone in the Barents Sea. The Bulgarian fishermen, however, continue to fish in the Barents Sea, but in its international waters.

23. V.V. Revnivtsev, "Poisk Optimal'noi Strukturi SP," *Rybnoe Khoziaistvo* (Moscow), No. 1, 1993. Although the Russian source specifically mentions that the *Feniks* only "receives and processes the fish from Kamchatkan fishermen," Bulgarian catch statistics, provided by OKEANSKI RIBOLOV, show a 1991 and 1992 catch of Alaska pollock (803 t in 1991 and 410 t in 1992). The Alaska pollock could only have been caught in the Russian 200-mile zone or the nearby international waters of the "peanut hole", since the species is only harvested in the North Pacific. The FAO statistics for Bulgaria, however, show no Alaska pollock catch for those years. The discrepancy could not be explained with available data.

24. *Pari* (Sofia), 12 May 1993.

25. U.S. Embassy, Sofia, 29 September 1993.

26. "UK/Bulgarian Joint Fishing Venture," *Eurofish Report*, 15 July 1993.

27. U.S. Embassy, Sofia, 29 September 1993.

28. National Marine Fisheries Service, *Fisheries of the United States*, Washington, D.C., various years.

29. Todor Ivanov, Managing Director of OKEANSKI RIBOLOV, Personal Communication, September 1993.

30. FAO, Fishery Country Profile. *Bulgaria*. Rome, April 1991.

31. *24 Chasa* (Sofia), 21 June 1993.

32. This figure is probably wrong as 44,000 tons of fishmeal would convert into a 220,000 t catch. The Bulgarian total fisheries catch that year was only 100,200 tons.

33. *Zemedelsko Zname* (Sofia), 31 March 1965; *Transporten Glas*, February 1968.

Appendix 1. Bulgaria. Delivery of large high-seas fishery vessels, by year built, number, class, gross registered tonnage, and country of construction; 1964-90.

Vessel type/Year	Number	Class	GRT	Country built
FISHING TRAWLERS				
1964	1	TROPIK	2,640	GDR
1965	2	TROPIK	5,280	GDR
1966	2	TROPIK	5,280	GDR
1967	3	MAYAKOVSKII	9,510	USSR
1968	4	ATLANTIK	10,628	GDR
1969	3	ATLANTIK	7,971	GDR
1970	3	ATLANTIK	7,971	GDR
1971	2	ATLANTIK	5,314	GDR
1974	5	KALMAR	12,240	Poland
1975	4	KALMAR	9,792	Poland
1988	1	PULKOVSKII	4,407	USSR
1990	1	ZHELEZNYAKOV	726	USSR
	31		81,759	
FISHERY SUPPORT				
1968	1	SIBIR	4,942	USSR
1969	2	SIBIR	9,884	USSR
1970	1	SIBIR	4,942	USSR
1972	1	SIBIR	4,942	USSR
	5		24,710	

GRAND TOTAL = 36 vessels TOTAL GROSS TONNAGE = 106,469 GRT

Sources: U.S. Navy, Office of Naval Intelligence, 26 July 1993; Milan Kravanja, NMFS, Personal Communication, 1 October 1993 (for the years 1964-67).

Note: All 5 TROPIKs, 1 MAYAKOVSKII, and 6 out of the 12 ATLANTIKs were decommissioned and are currently not on the Bulgarian fishing fleet register.

Appendix 2. Bulgaria. Fishing fleet, by class, vessel name, gross registered tonnage, and country and year of construction; 1993.

Class/Vessel name	GRT	Construction Country	Year
HIGH-SEAS FLEET			
ATLANTIK- 6 vessels			
Limoza	2,657	GDR	1970
Lorna	2,657	GDR	1970
Melanita	2,657	GDR	1969
Pingvin	2,657	GDR	1968
Ralida	2,657	GDR	1970
Zikloniya	2,657	GDR	1970
KALMAR (B-418)- 9 vessels			
Afala	2,448	Poland	1974
Aktinia	2,467	Poland	1974
Alfeus	2,448	Poland	1974
Argonavt	2,448	Poland	1974
Fizalia	2,448	Poland	1975
Kaprela	2,448	Poland	1975
Ofelia	2,448	Poland	1975
Rotalia	2,448	Poland	1975
Sagita	2,448	Poland	1974
MAYAKOVSKII- 2 vessels			
Balkan	3,170	USSR	1967
Fregata	3,170	USSR	1967
PULKOVSKII MERIDIAN- 1 vessel			
Feniks	4,407	USSR	1988
SIBIR- 5 vessels			
Albena	5,942	USSR	1970
Kiten	5,942	USSR	1972
Lazuren Briag	5,942	USSR	1969
Slantchev Briag	5,942	USSR	1968
Zlatni Piasatzi	5,942	USSR	1969
ZHELEZNYAKOV- 1 vessel			
R/KI	726	USSR	1990
COASTAL FLEET			
BALTIKA- 5 vessels			
K 37	117	USSR	1990
K 38	117	USSR	1990
K 39	117	USSR	1990
K 40	117	USSR	1990
K 41	117	USSR	1990
CLASS UNKNOWN- 5 vessels			
RK 14	140	Germany	1965
RK 15	140	Germany	1965
RK 16	140	Germany	1965
RK 17	140	Germany	1965
RK 35	117	USSR	1985

TOTAL = 34 Vessels High-seas: 24 Coastal: 10

TOTAL GROSS TONNAGE = 80,438 GRT
High-seas GRT: 79,176 Coastal GRT: 1,262

Source: U.S. Navy, Office of Naval Intelligence, 26 July 1993.

Appendix 3. Bulgaria. Number of high-seas fishing and fishery support vessels, 1975-92.

Year	Fishing	Support	Total
	Number of vessels		
1975	28	5	33
1976	30	5	35
1977	30	5	35
1978	30	5	35
1979	30	5	35
1980	30	5	35
1981	29	5	34
1982	29	5	34
1983	29	5	34
1984	29	5	34
1985	28	5	33
1986	28	5	33
1987	28	5	33
1988	28	5	33
1989	28	5	33
1990	23	5	28
1991	22	5	27
1992	21	5	26

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

Appendix 4. Bulgaria. Gross registered tonnage of high-seas fishing and fishery support vessels; 1975-92.

Year	Fishing	Support	Total
	1,000 Gross Tons		
1975	72.2	28.9	101.1
1976	77.2	28.9	106.1
1977	77.4	28.9	106.3
1978	77.4	28.9	106.3
1979	77.4	28.9	106.3
1980	77.4	28.9	106.3
1981	75.4	28.9	104.3
1982	75.4	28.9	104.3
1983	75.4	28.9	104.3
1984	75.4	28.9	104.3
1985	73.0	28.9	101.9
1986	73.0	28.9	101.9
1987	73.0	28.9	101.9
1988	73.0	28.9	101.9
1989	73.0	28.9	101.9
1990	60.2	28.9	89.1
1991	55.6	28.9	84.5
1992	52.4	28.9	81.3

Source: Lloyd's Register of Shipping, *Lloyd's Register of Shipping Statistical Tables*, London, various years.

Appendix 5. Bulgaria. Inland, coastal, and distant-water fisheries catch, by FAO statistical areas; 1975, 1980, and 1985-1992.

Fishing Area	Year									
	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric tons									
Inland (05)	7.8	12.4	11.9	14.1	12.9	12.2	12.1	8.5	8.5	N/A
Coastal(37)	8.6	17.9	17.1	13.0	12.2	8.2	8.6	2.9	2.9	N/A
Distant Water										
21	28.1	1.1	-	-	-	-	-	1.9	1.9	N/A
27	36.4	9.2	7.7	12.1	13.5	10.8	5.7	4.0	4.0	N/A
34	45.6	49.8	-	-	-	-	-	0.5	0.5	N/A
41	-	-	17.8	20.9	22.8	42.1	31.9	28.1	21.9	9.0
47	31.6	19.1	43.5	49.0	49.4	43.8	43.7	8.5	8.5	N/A
48	-	1.2	-	0.2	-	-	-	-	-	N/A
87	-	15.6	2.3	-	-	-	-	1.7	1.7	N/A
Subtotal	141.7	96.0	71.3	82.2	85.7	96.7	81.3	44.7	38.5	27.2(E)
Percentage*	89.6	75.9	71.2	75.2	77.4	82.6	79.7	79.7	77.2	N/A
Total	158.1	126.4	100.2	109.3	110.7	117.1	102.0	56.1	49.9	N/A

Sources: FAO. Yearbook of Fishery Statistics: Catches and Landings; Rome, various years. The 1992 estimate was obtained from the U.S. Embassy in Sofia in September 1992.

* High-seas fisheries catch as a percentage of the total catch.
E - Estimated
N/A - Not available

Note: The totals may not add because of rounding.

Appendix 6. Bulgaria. Fisheries catch off the Falklands Island, by species and quantity; 1988-92.

Species	Year				
	1988	1989	1990	1991	1992
	(Metric tons)				
Hake	-	122	85	59	-
Blue Whiting	-	5,820	18,998	20,311	8,938
Hoki	-	796	878	40	44
Squid	-	-	333*	-	-
Other	-	2,327	1,768	1,479	-
Total**		9,069	22,099	21,888	8,981

Source: Falklands Fisheries Department, 1993.

* Includes 328 tons of illex and 5 tons of loligo.
** Totals may not agree because of rounding.

APPENDIX 7

AGREEMENT ON COOPERATION BETWEEN THE USSR AND THE PEOPLE'S REPUBLIC OF BULGARIA IN THE DEVELOPMENT OF OCEAN FISHING

The Government of the USSR and the Government of the People's Republic of Bulgaria, noting the successes scored in the exercise of cooperation between the USSR and Bulgaria in the development of ocean fishing,

Guided by the relations and friendship and close cooperation which exist between the USSR and Bulgaria and

Proceeding from the assignments set in the Comprehensive Program of the Continued Extension and Improvement of Cooperation and Development of the Socialist Economic Integration of the CEMA Countries,

Have signed this agreement as follows:

Article I

The contracting parties agree to cooperate in the development of the two countries' ocean fishing in accordance with the provisions of this agreement.

Article II

To this end the contracting parties will instruct their competent organizations:

a) to provide for the delivery, in compliance with the principle of mutual compensation, of fish and fish products to Soviet and Bulgarian ports by passing runs of Soviet and Bulgarian transport refrigerator ships, which will operate to schedules agreed between the parties' competent organizations;

b) to practice on agreed terms cooperation in the production of certain fishing implements and parts of their tackle and certain types of fishing and fish-processing equipment and parts thereof;

c) to render in individual instances at sea mutual assistance with certain types of fishing and fish-processing equipment and spares and also to render individual mutual packaging material preparation services;

d) to practice the coordination of their efforts in international fishing organizations and also in the development of bilateral relations with third countries for ensuring the efficient operation of Soviet and Bulgarian fishing craft with regard to the interests of Soviet and Bulgarian fishing;

e) to adopt measures for the exercise of cooperation in the sphere of the maintenance of fishing craft by way, specifically, of the development of ship-repair capacity and also ship spare production plants.

Article III

In accordance with Article I, the competent organizations of the two contracting parties will:

practice close coordination and cooperation in the work of research and planning and design organization on issues and problems of interest to the parties;

exchange experience in the field of the planning of fish industry, invention and efficiency promotion activity and patenting and standardization and also exchange published information on the fish industry; and

practice the mutual exchange of production forms and records and new models of fishing implements and fishing and fish-processing equipment and also production records pertaining to the production of new types of fish products.

The contracting parties' cooperation organization will be guided here by the "Procedure for the Exercise of S&T Cooperation Between the USSR and the People's Republic of Bulgaria" adopted by the ninth session of the Standing Subcommission for S&T Cooperation Between the USSR and Bulgaria on 19 December 1968.

Article IV

The Government of the USSR will ensure that Soviet organizations render Bulgarian organizations technical assistance in the further development of ocean fishing and the training of fish industry personnel.

Technical assistance will be rendered by way of:

the inclusion of Bulgarian fishing craft in Soviet fishing expeditions, their provision with fuel and water and the granting of the necessary scientific-industrial information and also Bulgarian specialists' participation in the work of departmental industrial coordination meetings held by competent organizations of the Soviet party and determining the deployment of the fishing craft and support for their operation at sea;

the assignment to Bulgaria of Soviet specialists to assist in the training of fish industry personnel and the acceptance in the USSR of Bulgarian citizens for instruction and industrial training at seafaring schools, on ships and at enterprises and in research and planning and design organizations.

Article V

The terms and the extent of the rendering of the technical assistance envisaged in Article IV of this agreement will be determined in contracts which will be concluded between themselves by competent organizations of the contracting parties.

Article VI

The assignment of Soviet specialists to Bulgaria and the acceptance of Bulgarian citizens in the USSR provided for in Article IV of this treaty will be effected in numbers and specialties and for periods agreed by the parties in accordance with the 8 April 1957 Agreement Between the Government of the USSR and the Bulgarian Government on the Conditions of the Assignment of Soviet Specialists to Bulgaria and Bulgarian Specialists to the USSR for Technical Assistance and Other Services and the 8 April 1957 Agreement Between the Government of the USSR and the Bulgarian Government on the Conditions of the Industrial-Engineering Training of Soviet and Bulgarian Specialists and Workers.

Article VII

The contracting parties will appoint their representatives, who will meet as necessary on the territory of each party in turn to elaborate specific measures pertaining to implementation of this agreement.

Article VIII

The provisions of this agreement do not affect the contracting parties' rights and obligations ensuing from current bilateral and multilateral fishing agreements.

Article IX

This agreement will take effect as of the date it is signed and will as of this date replace the Agreement on the USSR's Rendering of the People's Republic of Bulgaria Technical Assistance in the Development of Ocean Fishing Signed on 21 November 1968.

Article X

This agreement has been concluded for the term of 8 years. It will remain in force for each of the 5 subsequent years unless either contracting party denounce it no later than 6 months prior to the expiration of the 5-year period.

This agreement may be altered at the parties' mutual consent.

DONE in Burgas on 23 April 1973 in two copies, each in Russian and Bulgarian, both copies, furthermore, being of equal validity.

(Signatures follow)

Appendix 8. Bulgaria. Supply of edible and non-edible fishery products and per capita consumption of fishery products; 1985 and 1989.

Year	1985	1989
	(1,000 metric tons)	
Edible		
Catch	78.2	102.0
Imports	38.2	0.3
Exports	38.0	46.7
Total supply	78.4	55.6
Per capita consumption	8.7 kg	6.2 kg
Non-Edible		
Production	44.4*	-
Imports	146.0	81.0
Total supply	190.4	81.0

Source: FAO. Fishery Country Profile. Bulgaria. Rome, April 1991.

* This figure is probably a mistake (See endnote 29 for details).

4.3

POLAND

The Polish fishing industry, which expanded its operations into the world's oceans in the 1960s and 1970s, is currently in a state of severe crisis. Fishery landings, which peaked in 1975 at 800,000 metric tons, have decreased to only 514,000 tons in 1992. Once numerous fishing grounds of the Polish high-seas fleet have now shrunk to a major fishery in the Pacific Northwest and two smaller fishing operations off the Falkland Islands and in Antarctica. The Pacific fishery, however, is in danger of being closed down by insistent Russian demands for a fishing moratorium to prevent overfishing. Limited fishing opportunities have forced the Polish companies to reduce the number of their vessels; during the last 7 years these companies sold 48 vessels to fishermen from 13 other countries. Only 53 stern trawlers are now engaged in high-seas fishing and their number is expected to continue decreasing. The Polish fishing industry, accustomed to substantial financial subsidies from the government, and to regulated prices for fishery products, has had to learn to do without them. Price regulation ended in 1989 and most subsidies were discontinued in 1990. The entry into a partially free-market system has caused severe problems for both high-seas and Baltic fishing companies which now have to rely almost exclusively on market forces to survive in a highly competitive environment.

CONTENTS

I. Background 210
II. Fishing Fleet 213
A. High-seas Fleet 215
B. Fleet Reduction 215
C. Construction of Fishing Vessels 216
D. Subsidies 217
E. Competition 218
III. High-seas Fishery Catch 218
IV. High-seas Fishing Grounds 220
V. High-seas Fishing Companies 221
VI. Fisheries Administration 223
VII. Bilateral Agreements 224
VIII. Joint Ventures 227
IX. Outlook 228
Sources 229
Endnotes 230
Appendices 235

I. BACKGROUND

The Republic of Poland, a northern East European country, bordering on Czechoslovakia, Germany, Lithuania, Belarus, Ukraine, and Russia (at Kaliningrad Oblast) had over 38 million inhabitants as of July 1992. It covers a total area of 312,680 square kilometers (slightly smaller than New Mexico), and its coastline extends along the Baltic Sea for 491 kilometers. It has 4 major fishery ports on the Baltic Sea -- Gdansk, Gdynia, Szczecin, and Swinoujscie.

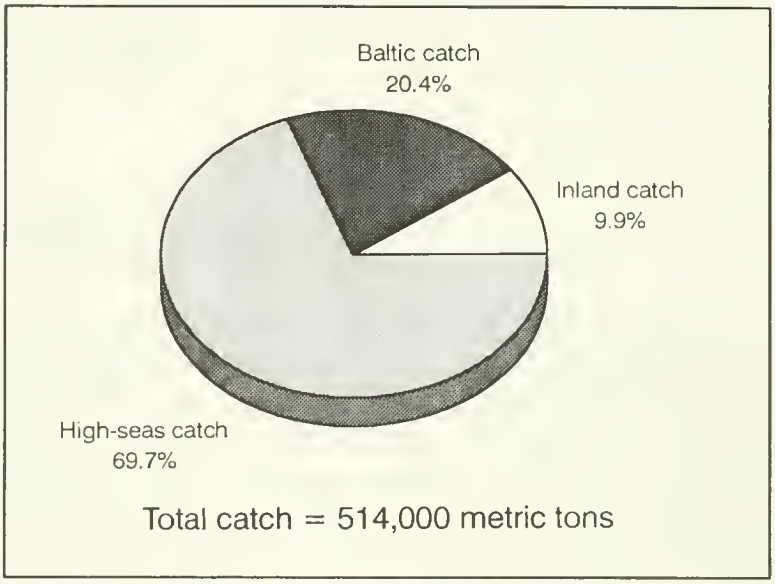


Figure 1. Poland. Fisheries catch, by percent of total; 1992.

Although the fishing industry in Poland is an important provider of food and a significant earner of hard currencies, it is not a large component of the national economy. The Polish Marine Fisheries Institute (MIR) in Gdynia estimated that in 1992 only about 0.3 percent of the gross national product was contributed by the fisheries sector.[1] In the maritime provinces, however, fisheries and its supporting branches of the economy (shipbuilding, trade, etc.) play a leading role and provide employment to a large segment of the population, often in locations where no other employment opportunities exist.

In 1992, almost 32,000 persons were employed in Polish fisheries, yet this represented only 0.2 percent of total employment.[2] The per capita consumption of fishery products is about 6 kilograms.[3] Consumption is expected to increase, mainly because of herring and mackerel fishery imports, but also because the Polish herring and mackerel catch is now being processed by private, competing companies which package it attractively to appeal to more consumers.[4]

In 1992, the total Polish fisheries catch was 514,000 metric tons (t), most of which was harvested on the high-seas (figure 1). Before World War II and in the early 1950s, the Baltic catch represented the entire Polish catch, but by 1992 it had been reduced to 105,000 t, or about 20 percent of the total, while the high-seas catch (358,500 t) had grown to 70 percent of the total. The inland catch (51,000 t in 1992), although never a substantial part of the overall catch, has been increasing steadily since 1980 when only 18,700 t were harvested.

In 1989, following the adoption of a democratic political system and movement toward a free-market economy, changes began to be implemented in the Polish fishing industry. The previous subsidies[5] and fixed prices for fishery products were abandoned, a liberal policy based on market forces was introduced, and foreign trade barriers were abolished.[6]

The United States Government has not recognized the incorporation of Estonia, Latvia, and Lithuania into the Soviet Union. Other boundary representation is not necessarily authoritative.
Malmo
SWEDEN
Bornholm (Denmark)
Klaipeda
Kaunas
Vilnius
Kaliningrad
Sassnitz
Gdynia
Gdańsk
Słupsk
Elbląg
Suwałki
Koszalin
Tczew
Świnoujście
Olsztyn
Grodno
GERMAN DEMOCRATIC REPUBLIC
Szczecin
Bydgoszcz
Ostrołęka
Łomża
Białystok
Piła
Toruń
Gorzów Wielkopolski
Ciechanów
BERLIN
East Berlin
SOVIET UNION
Włocławek
Płock
Frankfurt
Poznań
Warsaw
Brest
Konin
Siedlce
Biała Podlaska
Zielona Góra
Leszno
Skierniewice
Cottbus
Kalisz
Łodz
Sieradz
Radom
Piotrków Trybunalski
Lublin
Kovel
Gorlitz
Dresden
Legnica
Wrocław
Chełm
Jelenia Góra
Częstochowa
Kielce
Zamość
Wałbrzych
Opole
Tarnobrzeg
Hradec Králové
Bytom
Prague
Gliwice
Katowice
Kraków
Rzeszów
Tarnów
Przemysl
L'vov
Ostrava
Bielsko Biała
Krosno
Nowy Sącz
CZECHOSLOVAKIA
Košice
Uzhgorod
HUNGARY
Poland
International boundary
Województwo (province) boundary
National capital
Województwo (province) capital
Railroad
Road
0 25 50 75 100 Kilometers
0 25 50 75 100 Miles
Province
Capital

In May 1990, the Government began a program to privatize state-owned fishery enterprises to reduce unit costs and increase economic efficiency. It was envisioned that fishery enterprises would divide, downsize, or transform themselves into profitable independent companies.[7]

II. FISHING FLEET

In July 1993, the Polish fishing fleet consisted of 300 vessels with a total capacity of 276,000 GRT (table 1). Of this total, 85 vessels having over 250,000 GRT, or about 91 percent of the total fleet tonnage, were engaged in high-seas operations. The smaller vessels (100-500 GRT) are mostly cutters fishing in the Baltic Sea. In addition, over 200 small vessels below 100 GRT capacity also fished the Baltic.

Table 1. Poland. Fishing fleet, by selected vessel capacity, 1993.

Capacity	Number	GRT	Average GRT
100-500 GRT	215	25,602	119
Above 500 GRT	85	250,685	2,949
TOTAL	300	276,287	921

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993

Lloyd's of London lists, in its latest statistical tables for June 1992, the same number of 85 high-seas fishery vessels (appendix 1) and divides them into 73 high-seas fishing and 12 fishery support units.

Fishing vessels are shown by gross tonnage in appendix 2. The statistics show clearly the elimination of smaller side trawlers in the 500-999 GRT range from 67 units in 1975 to only 4 units by June 1992. Similarly, the number of medium-sized trawlers (1,000-1,999 GRT range) was less than a half of those deployed in 1975 (12 units compared to 27 units). Although the number of large stern factory trawlers remained fairly constant over the last two decades (50 in 1975 and 56 in 1992) their number fluctuated greatly. It increased from 1975 to 1977 by 22 units, or by almost 50 percent. One must suppose that, encouraged by the ever-increasing fisheries catch which peaked in 1975 at 800,000 metric tons, Polish fishing companies ordered 2 dozen new stern trawlers to join in the distant-water fishing expansion. When the extensions to 200-mile fishery zones occurred in 1976 and 1977, it was probably too late to stop the orders from the shipyards. The reality had to be faced, however, and in 1978, only 3 trawlers were added and none in 1979. The high-seas trawler fleet remained constant for a few years and then began to decrease slowly until 1985. Because replacements were built in the late 1980s, the total number of stern trawlers remained the same.

Poland's fishery support vessels were originally built in the 1960s, but their modernization and constant replacement kept the number at about 10 units. A strong building program in 1988-89 increased their number to 13 (appendices 3 and 4).

For the last few years, however, Lloyd's statistics have become unreliable. The changes in the Polish (and probably other East European fleets) are occurring so rapidly and unpredictably that information is not flowing quickly enough to be registered in time. The OECD statistics show much lower numbers of Polish stern trawlers in both 1990 (77 units) and 1991 (65 units) as can be seen in appendix 4.

Photo 1. Poland built 22 large stern factory trawlers of the KALMAR class (2,400GRT) for its distant-water fishing operations.

These data were confirmed by official Polish statistics which were received through the U.S. Embassy in Warsaw only a few days before the final draft was typed. They show that, at the end of 1992, the Polish fleet of high-seas vessels numbered 66 units (appendix 5). Among these were 34 fishery vessels having over 2,500 gross registered tons. If we deduct from this figure the 13 fishery transport and processing vessels listed in appendix 6[8], we obtain the actual number of Polish stern factory trawlers at the end of 1992 -- 52 units.

The authors have described this somewhat confusing process of analysis to point out that the various sources, though highly reliable in most cases, may not be fully trusted in the case of Eastern Europe and the former Soviet republics. The only foolproof statistics are those released by the respective Governments. We were fortunate to have the excellent cooperation of the Polish Ministry of Transportation and Maritime Economy in obtaining the statistics listed in appendices 5 and 6. Unfortunately, this was not the case in any other country covered in this volume.

The Polish high-seas fleet is completely separated from the operations of the Baltic fleet. They have no impact on each other and are also administered separately. The high-seas fleet is owned by three state-owned companies which do not have any operations in the Baltic (as is the case in some of the other Baltic states).

A. High-seas Fishing Fleet

The Polish high-seas fishing fleet numbered 66 units in 1992. Of this total, 53 units were fishing vessels (appendix 7). The remaining 13 units were used for transporting harvested fish (appendix 8). A complete list of vessel names, classes, gross registered tonnage (GRT), and country and year of construction is presented in appendices 7 and 8.[9]

Most fishing vessels are large stern factory trawlers having in excess of 2,000 and even 3,000 gross tons (photo 1). The 13 various classes of trawlers (appendix 7 lists them alphabetically) were all built in Poland. The country's shipyards rapidly developed the capability to build large high-seas trawlers after Poland entered distant-water fisheries in the late 1950s. Polish shipyards eventually supplied fishery vessels not only to the Soviet Union, but also to Romania, Bulgaria, and even West European countries.

The high-seas fishery transport and processing vessels were also built in Polish shipyards, except the first one (the *Harmattan*), which was bought in Germany in 1966. Appendix 8 shows that the TERRAL class of refrigerated transports, built in the early 1980s, had a gross tonnage half the size of the ZULAWI class built in the 1970s, but the 2 KOCIEWIE-class baseships, constructed in 1986-87, again had a gross tonnage exceeding 8,800 tons.

The fishery transport fleet played an important role in the expansion into high-seas fishing grounds from Polish ports as they made possible the delivery of supplies, fuel, water, and the transportation of frozen fish and other fishery products.[10] A recent report indicates that their deployment in supporting the high-seas fleet has been greatly reduced, but it gives no details of activities in which they are engaged.[11]

The entire Polish high-seas fishing fleet was constructed in domestic shipyards, and the majority of these vessels are 15-25 years old.[12] Only 23 vessels (out of a total of 300) were purchased abroad. Their gross tonnage of 7,170 GRT, is less than 3 percent of the total fishery tonnage built in Poland during the last 35 years (appendix 9). The replacement of aged factory trawlers with new, more efficient vessels is the most important task for the Polish fishing industry if it is to remain economically viable in the 1990s.[13]

B. Fleet Reduction

The Polish fleet is plagued by overcapacity and obsolescence. Many high-seas vessels are 20-30 years old which limits considerably their future usefulness. By the year 2000, most will have to be retired.[14]

Over the past few years, Poland has been decommissioning vessels fairly steadily. From a report published by the Organization for Economic Cooperation and Development, it is evident how rapid this process has been. From 1990 to 1991, Poland has decommissioned 13 high-seas vessels totalling 28,000 GRT.[15] The reflagging of Polish high-seas fishing and fishery support vessels is accelerating. During the past 2 years, a total of 28 vessels were reflagged to 12 countries (table 2). The names, gross tonnage, and the year of construction are given in appendix 10. There are many reasons for reflagging, but time does not permit the authors to analyze them at this time.[16]

Table 2. Poland Fishery vessels reflagged to other countries, by country and number.

Country	Number of Vessels
Panama	4
China	3
Cyprus	3
Argentina	3
Germany	3
Nigeria	2
Honduras	2
Malta	2
St. Vincent	2
Liberia	1
Russia	1
Norway	1
Unknown	1
Total	28

The replacement or modernization of distant-water vessels and equipment is hindered by the current financial condition of the Polish high-seas fishing companies. Only DALMOR possesses sufficient financial resources to begin the replacement of processing equipment. ODRA's financial situation, and especially that of the GRYF company, is poor. The general opinion in Poland is that the fleet cannot be replaced without considerable support from the country's budget which would provide the initial capital and/or low interest credits. The idea has been discussed by the Polish parliamentary committee dealing with fisheries and has also been presented to the Prime Minister. Lobbying for its implementation are the shipbuilding interests which hope to get the orders for the new modern high-seas fishing vessels.[17]

In 1992, a total of 14 vessels have been sold to foreign buyers while no new high-seas trawlers were built in domestic shipyards or purchased abroad. Of the 14 vessels sold, 2 were the large motherships of the GRYF POMORSKI class. These were the last 2 motherships the Polish high-seas fleet still owned; their combined tonnage was 27,000 gross registered tons. The remaining 12 deregistered trawlers were stern factory trawlers. Two of these trawlers were sold to China which is expanding its high-seas operations; five were purchased by German companies and one was sold to the United Kingdom. Between 1985-92, a total of 48 used Polish fishing vessels were sold with a total gross tonnage of over 85,000 tons.[18]

C. Construction of Fishing Vessels

Beginning in the mid-1960s, the Polish shipbuilding industry was relatively strong. The construction of fishery vessels was oriented not only toward domestic demand, but also toward exports to some 20 countries. In the 1990s, however, vessel construction began to decline as a result of overcapitalization in the Baltic fishery and a lack of orders from EC countries. In 1990, Polish shipyards built 19 fishing vessels with a total gross tonnage of 18,475 tons, but, by 1992, this output had decreased to 1 vessel with 143 GRT (appendices 11 and 12). All programs encouraging fishing vessel construction have been abandoned and instead, because of the overcapacity of the Polish fishing fleet, efforts are being made to sell off or scrap existing vessels.[19]

Poland has 5 shipyards building small, medium, and large trawlers (table 3). The total employment in these shipyards in 1991 was over 19,000 workers, but it is likely that by 1993 this total had shrunk considerably.

The Gdansk Shipyard continues to build fisheries support vessels, but has difficulties selling them. For instance, a large fishery mothership was built for the DALMOR high-seas company; however, in view of the uncertainty surrounding Polish high-seas fishing, DALMOR refused to pay for it. The

Table 3. Poland. Shipyards building fishery vessels and the number of persons employed; 1993.

Name	Employment*	Type of Vessel
Stocznia Gdanska	7,945	Stern trawlers Motherships
Stocznia Gdynia	6,689	Stern trawlers
Stocznia Polnocna	3,183	Trawlers
Stocznia Ustka	788	Small trawlers
Stocznia Wisla	738	Small trawlers
Total	19,343	

Source: Budnownictwe Okretowe i Gospodarka Morska, September-October, 1993.
* Employment given is for 1991.

Director General of the Gdansk Shipyard (Hans Szyc) had talks with German interests in an effort to sell the vessel elsewhere, but it is not known if these negotiations have been successful.[20]

The importation of fishing vessels from abroad is nonexistent because of the overcapitalization in the Baltic fisheries and because the Polish shipyards could easily satisfy the demand for high-seas vessels. Any Polish company wishing to import fishing vessels would have to pay a 5 percent import duty and also scrap an old vessel before purchasing another one. No fishing vessels were imported in 1992 or 1993.[21]

D. Subsidies

The fishing industry of Poland has, in addition to supplying fishery proteins to the domestic markets, also acted as an important earner of hard foreign currency. Because of this export function, the Polish state-owned companies (which provided 88 percent of all fishery landings) were heavily subsidized by the Government from the general budget.[22]

After the political changes in 1990, these subsidies were drastically reduced. All programs supporting fishing vessel construction were suspended after 1990. Price regulation schemes had been abandoned even earlier in 1989. Private or state-owned enterprises must rely exclusively on market forces. The following programs, however, still receive support from the Polish Government: 1) repair and maintenance of fishing harbors; 2) vocational schools, training sea-going personnel; and 3) scientific research related to fisheries management.[23]

Government subsidies to the Polish fishing industry were a powerful stimulus for the rapid development of its fishing fleet and the resulting increase in fisheries catch. The ever-increasing influx of fishery products brought back by Polish fishermen from the proverbial seven seas, would probably have depressed prices severely had it not been for the artificial propping up of prices set and controlled by the government. As in the Soviet Union, in the final analysis, it was the housewife buying a kilogram of fish at the local store that financed the extravagant fishery investments in the 1950s and 1960s. Moreover, state-owned fishing enterprises (and shipyards as well) were given direct subsidies from the state budget, i.e., the taxpayers' pockets. When the landings started to decrease and the losses began to increase in the 1970s and 1980s, it was from the government's budget that the fisheries sector obtained its survival funds. Some subsidies are still provided to fishing companies to help them restructure and resolve their most pressing financial problems, but the amounts granted and other details are not available.

E. Competition

Increasing competition for domestic markets has caused considerable anxiety among Polish fishermen and erupted into organized protests on April 5, 1993. Following in the footsteps of their West European colleagues, they blockaded Polish fishing ports demanding that the Polish Government abolish taxes on diesel fuel used by fishing vessels, introduce higher customs duties on imports of cheap fishery products from Russia and the Baltic countries, and reintroduce a system of price support payments to domestic producers. A few days later, Polish fishermen and the Seamen's Union (a Solidarity union) prevented Russian vessels from entering Polish ports to sell their Baltic herring catch at a fraction of the local price demanded by Polish fishermen.[24] Finally, on April 13, union members imposed a boycott of all foreign fishery imports to last until the Government accepts the fishermen's demands.

III. HIGH-SEAS CATCH

The Polish high-seas fleet has fished, since the 1950s, in almost all of the world's productive marine grounds. From 1980 to 1992, access to Atlantic and Pacific grounds was secured through a number of agreements with Peru, Argentina, Canada, the United States, etc. The catch, however, has been in slow, but inexorable, decline since the mid-1980s. This trend is caused primarily by the lack of hard currency to pay for fishing licenses to gain access to foreign 200-mile zones. This has limited the deployment of Polish vessels and led to the under-utilization of the fleet. In addition, the inability of the three Polish high-seas fishery companies to generate sufficient profits to modernize and replace their fleets has caused a steady decrease in the efficiency of the Polish high-seas fishing fleet.

The Polish fisheries catch is currently almost 40 percent lower than it was in 1975 (appendix 13). In 1992, Polish fishermen harvested over 514,000 metric tons (t) compared to 801,000 t in 1975. A careful analysis of appendix 13 shows that there have been tremendous changes, and even upheavals, in Polish fisheries. The Baltic coastal catch (FAO statistical area 27) is now less than one-third of what it used to be in 1975 (figure 2). The inland catch doubled during the same period of time, but it still contributes only 10 percent (51,000 t in 1992) to the total catch.

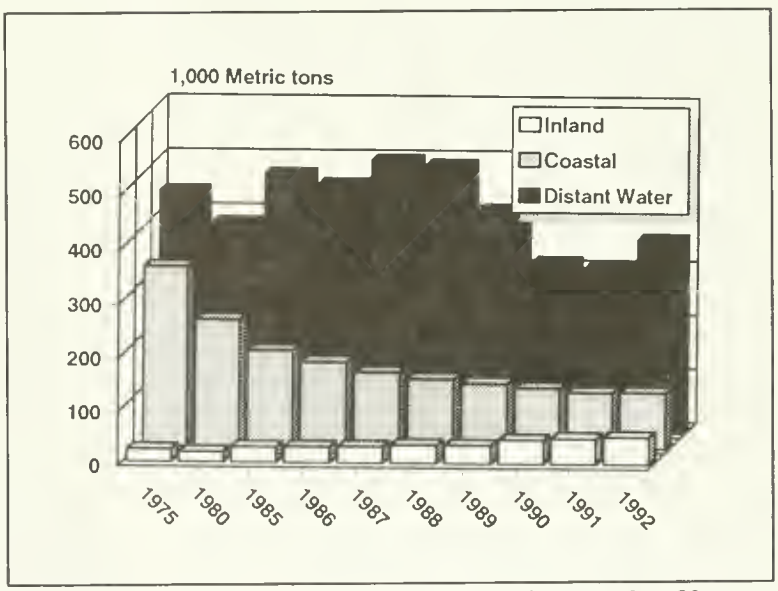


Figure 2. Poland. Fisheries catch, by type of fishery, 1975-80, 1985-92 (in metric tons).

Distant-water fisheries have fared somewhat better. In 1992, the Polish high-seas fishermen caught 359,000 t, only 18 percent less than the 440,000 t harvested in 1975. During those 17 years, the high-seas catch fluctuated considerably from a peak of over 500,000 in 1987 to a low of 306,000 in 1991. Its percentage of the total catch, however, remained a constant 60 to 70 percent.

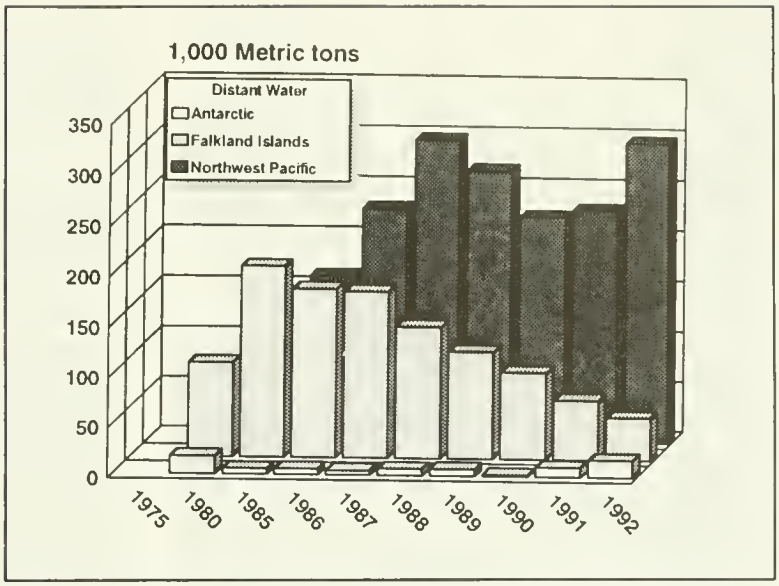


Figure 3. Poland. Distant-water fisheries catch, by region, 1975-80, 1985-92.

The catch by FAO statistical fishing areas fluctuated much more, both in quantity and in geographic location (figure 3). In 1980, for instance, the Polish high-seas fleet fished in ten major distant-water fishing areas; by 1992, the Poles conducted substantial operations in only three such areas. In 1980, the most important fishing grounds were in the South Atlantic, off the coasts of Africa and South America. By 1992, those grounds were insignificant compared to the large Pacific haul off Russia's 200-mile zone.

By far the largest fishery in 1992 was in the Northwest Pacific (FAO statistical area 61), where 298,000 t of Alaska pollock was landed in the international waters of the Sea of Okhotsk. The second most important fishing area in 1992 was the southwestern Atlantic fishing ground adjacent to the Falkland Islands (FAO statistical area 41). A total of 43,000 t was caught there, mostly squid (26,230 tons). This part of the Atlantic used to be the prime Polish harvesting ground in the late 1980s (figure 4) when the Argentine-British war made any fisheries enforcement difficult. In the last few years, however, the British have introduced a strict fisheries management regime to prevent overfishing and, as a result, have been issuing fewer and fewer licenses to foreign vessels. Consequently, the southwestern Atlantic fisheries now yield to Polish fishermen only about a tenth of what they

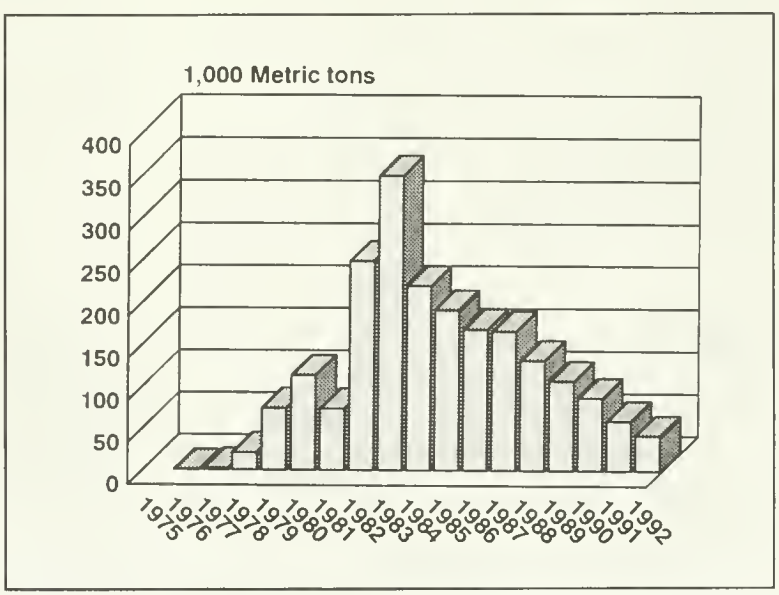


Figure 4. Poland. Fisheries catch in the southwest Atlantic, 1975-91.

harvested there only a decade ago (appendix 14).

The remainder of the high-seas catch, except for a negligible 1,000 t off New Zealand, was the 17,300 t of krill landed in the FAO statistical area 48, adjacent to the Antarctic continent.[25]

The Polish high-seas fleet abandoned many grounds that were fished a decade or two ago. During the last decade, the Polish vessels withdrew from fisheries off the West African coast (Mauritania), off Canada, the United States, Mexico, and other countries. A short-lived fishery (1982-84) in the southeastern Pacific, off Chile and Peru, was discontinued for unknown reasons.

IV. HIGH-SEAS FISHING GROUNDS

Polish vessels are concentrating their fishing effort principally in the international waters of the Sea of Okhotsk ("peanut hole") and around the Falkland Islands in 1993. This has been necessitated by the denial of access to other traditional fishing grounds[26], or because these grounds have become commercially unprofitable (for example, the waters off Mauritania and the fisheries on the Newfoundland Shelf).[27]

Southwest Atlantic (FAO statistical area 41): The area around the Falkland Islands has been Poland's second largest fishery (mostly for loligo squid) since 1987, but the catch has been declining steadily since 1983, a bumper year when 348,000 t of fish was harvested. By 1992, the catch had fallen to 42,500 t, a decrease of more than 50 percent from the 1990 catch figure (figure 4).[28]

Northwest Pacific (FAO statistical area 67): From 1985 to 1986, the Alaska pollock fishery in the international waters of the Bering Sea "donut hole" contributed significantly to Poland's overall fishing catch. Heavy fishing in the 1980s by the Japanese, Koreans, Chinese, and Russians, as well as the Poles, however, depleted the Bering Sea resources badly.[29] In the 1989, many Polish trawlers began to shift their operations to the Northwest Pacific and this was reflected in the "donut hole" catch statistics (figure 5). In 1988, Polish fishermen caught almost 300,000 t of Alaska pollock in that area. By 1991, the Polish harvest was only 54,900 tons[30]; in 1992, the Poles ceased fishing in the "donut hole" altogether even before a 2-year international moratorium on this fishery was adopted.

The majority of the Polish vessels, displaced from the Bering Sea in 1992, moved their operations to the international waters in the central Sea of Okhotsk (the so-

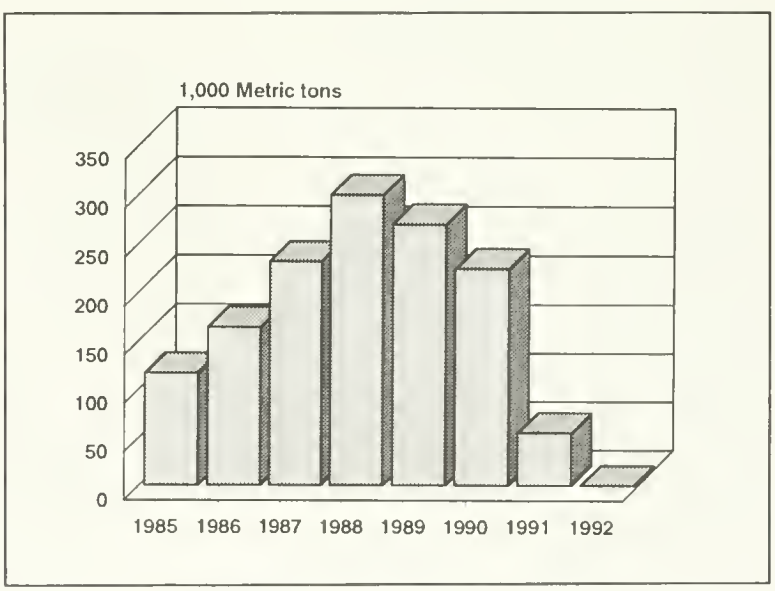


Figure 5. Poland. Bering Sea "donut hole" catch, 1985-92.

called "peanut hole"). The Polish catch in the "peanut hole" was 175,700 in 1991, and 297,700 in 1992. In early 1993, over 40 Polish large stern factory trawlers were operating in the "peanut hole" harvesting Alaska pollock,[31] about the same number as in December 1992.

Antarctic: Antarctic waters are fished to a small extent, primarily for krill. The size of these catches reflects a limited market.[32] During the 1990/1991 Antarctic season, 8 Polish vessels conducted fishing operations, mostly for krill, and harvested 9,591 t of fish in the Atlantic Sector of the CCAMLR Convention Area.[33] During the 1991/92 season, however, the Polish fishermen doubled their landings to 17,300 tons (appendix 13).

V. FISHING COMPANIES

Three large fishing and processing enterprises (with a total of about 12,500 employees) dominate the fishing industry in Poland: ODRA (located in Swinoujscie), GRYF (in Szczecin), and DALMOR (in Gdynia). During the communist era, these enterprises were heavily subsidized. The basic aim was to increase the catch, regardless of cost. To fulfill the production plans, generous subsidies were extended to these companies year after year by the Government from the state budget. When government subsidies were withdrawn in 1990, it became clear that their operations were unprofitable, and major restructuring was undertaken to make them economically attractive enough to be sold. It was evident that the Polish high-seas fleet was overcapitalized for the reduced harvesting opportunities of the 1990s. All three companies began to sell older fishing vessels and diversify into new economic activities, some not connected to fisheries. They continue to be state-owned companies, but after 1990, they became self-managing and allowed to make their own policy decisions.[34]

These three fishing companies currently own 53 stern factory trawlers with an average of about 2,500 GRT (the total fleet has 292,000 GRT[35]); this number represented a significant reduction from the 77 vessels that these companies owned at the end of 1990.[36] The 1992 catch of the high-seas fleet amounted to 360,000 t or 6,792 t per trawler.

DALMOR, not only the largest, but the best managed of the 3 high-seas fishing companies, was the quickest to adapt to the new exigencies. In 1992, its fishermen increased their catch by 35 percent[37] which made it possible for the company to turn a profit. DALMOR also concluded several joint ventures: one, with an Italian company,[38] procured an infusion of foreign capital and was used for the modernization of the company's processing plant; the other, with the Gdansk Repair Shipyard, will repair fishing vessels, both for domestic and foreign owners.[39] DALMOR owned 17 trawlers in 1992 and employed 3,581 persons; its fishermen caught 169,300 t of fish, or 47 percent of the total 1992 Polish high-seas fisheries catch of 358,500 tons. The value of the catch was estimated at US$ 85 million, 80 percent of which was exported for hard currency.[40]

The ODRA company owned 20 factory trawlers and 4 squid jigging vessels with processing facilities on board at the beginning of 1991 when it was contributing about 20 percent to Poland's total high-seas fishery landings.[41] ODRA sold its fish-processing plant to a private corporation named ODRA-

EUROPE, but has retained all of its trawlers. ODRA had major operational losses both in 1991 and 1992, as well as in the first half of 1993. The Government of Poland was considering its bankruptcy and dissolution, but the final decision has not yet been made.

The GRYF company restructured itself in 1992 into three companies,[42] hoping that it would be able to privatize three smaller units with more ease than a large company.

Financing operations: Polish high-seas fishing companies have been exporting 90-95 percent of their catch during the past few years, mainly to obtain rapid payment for their products. This is necessary to avoid carrying-over charges on temporary loans extended by Polish banks to cover the day-to-day operations of the companies. This was not a major problem when the Polish Government subsidized these companies with low interest rates on its bank credits and, if necessary, by direct subsidies.

In August 1990, however, the new democratic government discontinued all subsidies and began to privatize the industry. It takes many months before finished fishery products can be sold, and the slow capital turnover rate of the high-seas companies has exacerbated their tenuous financial state. The Polish fleets operate in distant waters which are reached after weeks-long voyages. The catch, or semi-processed products, are brought back to Poland months later. In the meantime, however, the company has to finance the operating capital through bank loans.

This situation became so critical that in 1993 the government's budget included preferential credits for the operations of both the deep-sea and Baltic fleets: 250 million and 80 million zloty, respectively. The cost to the government of these credit subsidies was estimated at 40 million zloty.[43]

Privatization: Only in 1990, when the Communist Party's dictatorship and the economic command system collapsed, were the subsidies and fixed prices abolished and the privatization of fishery assets (processing plants, fishing vessels, export and import trade, etc.) begun. The process of privatizing state-owned fishing companies and cooperatives is progressing slowly in Poland. Although the state-owned share of assets keeps decreasing, the public sector continues to dominate the field. No institutions exist that can effectively carry out such transactions. Furthermore, there is a lack of demand by Polish (and foreign) entrepreneurs for fishing vessels and processing plants.[44] Nevertheless, the Polish fishing companies which have been government-owned until recently, have made an attempt to privatize in accordance with the Privatization Law of July 13, 1990. Under this law, companies may form corporations in which foreign companies hold an interest. The main obstacles to privatization are the lack of available investment funds (both foreign and domestic) and the high interest charged on loans that could be secured.[45] On the other hand, the extensive contacts, which many Poles have maintained with the West European business community, and commercial deals concluded with countries that have market economies, contribute significantly to the growing private fisheries sector.

The first among the three high-seas enterprises to privatize was the ODRA company from Swinoujscie which transformed itself into a one-shareholder limited-liability company. The single shareholder, however, is the Polish State Treasury.[46]

With regard to the control of fishing companies, the state-owned apparatus continues for the most part to remain intact with only small pockets of privatization. The DALMOR high-seas company, for example, has several employees who hold shares in the company.[47]

While privatization is still at the drawing board stage for the fishing companies, the processing and marketing sector of the industry has made great strides. Private enterprises are expanding rapidly and competing with former state-owned marketing monopolists. The government organizations which have had a monopoly on the processing and selling of fishery products,[48] are now faced with numerous private wholesale and retail shops that are no longer obliged to buy their inventories from Polish companies; they can now import them, if the price is right. Foreign fish wholesalers have established branch offices in Poland and compete with both state-owned and private Polish suppliers. In the fish retail sector, there has been an explosion of new private outlets.[49] Already in 1991 over 68 percent of all fishery retail outlets were privately owned, and by 1993 the retail privatization is almost complete. It should be noted that private retail shops have substantially better facilities than their state-run competitors.[50]

The most effective privatization is in the smallish Baltic fisheries where, during 1990-93, private fisherman leased 137 cutters from state-owned companies.[51]

Legislation is now being discussed by the Polish parliament which is designed to introduce fishery management principles, policies and standards that would be comparable to those currently prevailing in the European Community.[52]

VI. FISHERIES ADMINISTRATION

In 1989, after the downfall of Poland's communist-led government, the Central Board of Fisheries, which administered the entire fishing sector (including the fleets, processing plants, as well as wholesale and retail marketing) was dissolved. Following a series of changes, fisheries were finally placed under the jurisdiction of the Ministry of Transport and Maritime Economy in Warsaw.[53] The Ministry immediately began the process of privatizing as much of the fishing industry as possible in order to adapt to the new market conditions being created in Poland.

RYBEX, the state-owned fishery export company of Poland's Ministry of Foreign Trade, monopolized Polish fishery exports for 40 years. It collected a 3.5 percent commission on such exports. This displeased the fishing companies that had not only produced the export commodities, but often also initiated contacts with foreign importers, negotiated the contracts, and shipped the goods. They considered RYBEX a parasitic organization, but under the communist system of centralized control there was no recourse. To make matters worse, RYBEX paid the exporting companies an average price for the same commodity, regardless of quality. DALMOR, which exported the highest quality of fishery products, felt that RYBEX was subsidizing companies with poorer quality goods, stifling any incentive to improve and make a better product. A new law, passed in 1990, allowed private companies to export on their own account. DALMOR was the first of the three large high-seas fishing companies to

start exporting its products in late 1990; it was followed by GRYF in 1991, and ODRA later that year.[54]

The retail and processing sectors as well as the Baltic fleet have largely been privatized. The 3 large high-seas fishing companies were difficult to privatize, however, and various schemes were devised to accomplish this while providing for the greatest possibility of achieving profitability.

VII. BILATERAL AGREEMENTS

Poland has many bilateral fishery agreements and joint ventures. Among these were an agreement allowing Polish fishermen to catch fish and squid in the exclusive economic zone (EEZ) of the United States and Canada, as well as a private arrangement for buying fish directly from U.S. and Canadian fishermen. Another arrangement allowed Poles to operate in UK waters around the Falkland Islands; bilateral agreements with Argentina and Peru were also concluded.[55] In 1993, in an effort to retain its capability to fish on the high-seas and to utilize the large capacity of its high-seas fleet, Poland is actively seeking further access to foreign distant-water grounds through intergovernmental agreements. Poland is currently negotiating bilateral fishery accords with several countries, but has successfully concluded only a few.

Angola: In April 1993, the Polish and Angolan Governments concluded an agreement allowing 5 fishing vessels owned by the Atlantis company of Gdansk to operate in Angola's exclusive economic zone in the southeastern Atlantic.[56]

Argentina: Poland reportedly signed a bilateral fisheries access agreement with Argentina in 1974.[57] Details regarding the implementation of this agreement are not available, but the FAO catch statistics show no Polish catch in the southwestern Atlantic (FAO statistical area 41) until 1976. The Polish catch grew phenomenally in that area from 2,700 t in 1977 to 357,900 t in 1983. The increases in the catch were unaffected by the Falklands conflict although some Polish fishing vessels were damaged or possibly sunk by both the British and the Argentines.[58] The Polish high-seas fleet, with the permission of the Argentine Government, at first transshipped its large catch in Argentine ports. Only when the Argentine fishing industry observed how large the Polish catch was did they withdraw permission for such transhipments (figure 4).[59] Press reports indicate that as many as 70 Polish vessels, the majority of the high-seas fleet, were fishing just outside the Argentine 200-mile zone after 1977.[60] There is no information available on the current state of the Polish-Argentine bilateral agreement, but a recent article claims that the arrangement is still in existence.[61]

Canada: In the early 1980s, Poland received cod allocations from Canada, and was allowed access to the Canadian 200-mile fisheries zone. As the "Canadianization" of the Atlantic coast fisheries proceeded, however, Polish fishery catch allocations in the Canadian EEZ declined.[62] Unusually severe ice conditions prevented cod fishing in 1990. Polish cod fishing off Canada was discontinued in 1991, because the DALMOR company, the principal Polish company fishing in Canadian waters, sold the vessels engaged in that fishery.[63] Unconfirmed reports indicate that several Polish vessels again fished outside Canada's EEZ in 1993.

On the Canadian Pacific coast, the Canadian Government allows Polish fishermen to purchase directly from Canadian fishermen at sea. These "klondyking" operations have been reduced somewhat from previous years, but still yielded the Poles 41,696 t of Pacific hake in 1992.[64]

Chile: Chile has not permitted Polish vessels to fish within its 200-mile zone in recent years. Polish fishermen have conducted mid-water trawls for jack mackerel and other species outside the Chilean 200-mile zone in the southeastern Pacific (FAO statistical area 87); the Polish catch totaled over 80,000 t in 1984. This, however, was the last year that the Poles operated in this region (figure 6).[65]

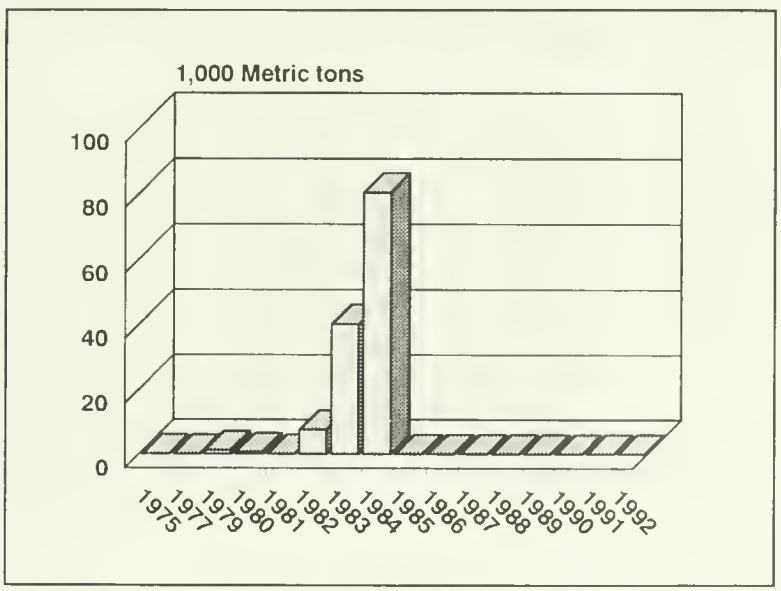


Figure 6. Poland. Fisheries catch in the southeast Pacific, 1975-80, 1985-92.

Falkland Islands: Poland initiated a major fishery in the southwestern Atlantic in 1979, although small landings were harvested as early as 1976. Most of this effort was concentrated outside the Argentine 200-mile zone. At the time, Polish fishermen probably did not fish extensively off the Falklands because Argentine naval patrols would seize foreign fishing vessels operating off the Falkland Islands, which Argentina claimed as its territory. The Polish catch from 1979-81 thus never exceeded 100,000 tons. This situation changed dramatically in 1982 for two reasons. Firstly, Poland redeployed vessels to the southwestern Atlantic after the United States reduced to zero its catch allocations in the northeastern Pacific following the proclamation of martial law by the Polish Communist Government.[66] Secondly, the 1982 Falklands conflict created an opportunity for Polish fishermen because it prevented Argentina from conducting enforcement patrols, while the British requested only a "voluntary curtailment" of the foreign fishing effort.[67] Taking advantage of these circumstances, Poland quickly escalated fishing operations off the Falklands, and the catch totaled nearly 350,000 t in 1983.

Polish catches declined during the next few years, especially after the British declared the 150-mile Falkland Islands Interim Conservation and Management Zone (FICZ) in October 1986, and introduced the licensing of foreign fishing. The Poles, unlike the Soviets and other communist countries operating in the southwestern Atlantic (Bulgaria, Cuba and former East Germany), applied for licenses to the Falkland Islands Government (appendix 14).[68] Polish fishermen continued to catch over 100,000 t annually during 1987-88, but reported that catches declined to about 70,000 t in 1989 and continued to decrease during the next 3 years (appendix 13 and figure 4).

Despite the decline, Poland remains one of the principal distant-water countries currently fishing off the Falklands. The 3 major Polish high-seas fishing companies have all deployed vessels there, targeting both squid and demersal finfish, mostly blue whiting. They deploy primarily large trawlers averaging about 2,500 GRT, and use Montevideo as a supply and transport base.[69]

In 1993, Poland obtained licenses for 5 large trawlers to fish off the Falklands during the so-called first season (January-June), when the catch is expected to include 3,700 t of loligo squid.[70] Another 4 vessels have licenses to harvest finfish during the second season (August to October).[71]

New Zealand: Two stern factory trawlers, one owned by the ODRA company, the other by DALMOR, are fishing inside New Zealand's 200-mile zone. It is believed that these trawlers are being leased by a New Zealand company under commercial contract.

Norway: The Norwegian Government has allocated Polish fishermen a saithe quota inside the Norwegian EEZ for 1992. Details are not available.

Peru: According to a knowledgeable writer[72], Poland has a bilateral fisheries agreement with Peru, but unfortunately no details were given. The article was published in early 1993 when most Polish trawlers were fishing either in the northwestern Pacific or off the Falkland Islands. It is believed that the Peruvian operation probably involves only a few vessels since most of the Polish fleet was deployed in the previously mentioned two fishing grounds.

Russia/Former USSR: In December 1987, the USSR and Poland signed a fisheries cooperation agreement (appendix 15).[73] Polish-Russian fishery relations have been strained recently because of the Polish fishermen's refusal to cease operations in the international waters of the Sea of Okhotsk ("peanut hole") despite repeated calls by Russia for a moratorium on fishing there.

A more recent irritant was the boycott against Russian trawlers trying to sell their Baltic herring catch in Polish ports. The Polish fishermen's union prevented them from entering and claimed that the Russians were dumping fish at prices 75 percent lower than the prevailing prices on the Polish market (for details see section on competition).[74]

Nevertheless, economic advantages have encouraged cooperation between the two countries' fishermen. A fish cooperative from Gdansk (Jednosc Rybacka) concluded a contract with the owners of 4 Russian trawlers based in Kaliningrad for delivery of their Baltic herring and sprat landings. The deal is mutually profitable as the Russian owners will buy fuel in Kaliningrad at low, subsidized prices and sell their fish in Poland at higher prices than they could get in Russia.[75]

Sweden: Following the establishment of exclusive economic zones in the Baltic Sea in 1977, Poland and Sweden concluded a bilateral fisheries agreement, which is reviewed annually. It allows reciprocal access to each other country's EEZ. On the average, Polish Baltic trawlers were allowed to catch 9,000 t of herring in the Swedish EEZ against 3,000 tons of Baltic cod that the Swedes were allocated in the Polish EEZ. In the summer of 1993, this agreement was suspended because of a severe decline of cod stocks in the Polish EEZ.[76]

United States: Poland signed a Governing International Fisheries Agreement (GIFA) with the United States on August 1, 1985; it allowed Polish vessels to fish in U.S. waters. This agreement was extended several times; it is now valid until December 31, 1993.[77]

In the late 1970s, Poland was allocated expanding catch quotas in the United States EEZ. In 1982, however, to encourage the democratic reforms begun by the Solidarity movement, the Polish fleet was expelled from the U.S. EEZ following the imposition of martial law in December 1981 by the then-Communist Polish Government. The Polish fleet had to discontinue its fishing in the U.S. 200-mile EEZ as it received no catch allocations (figure 7).[78]

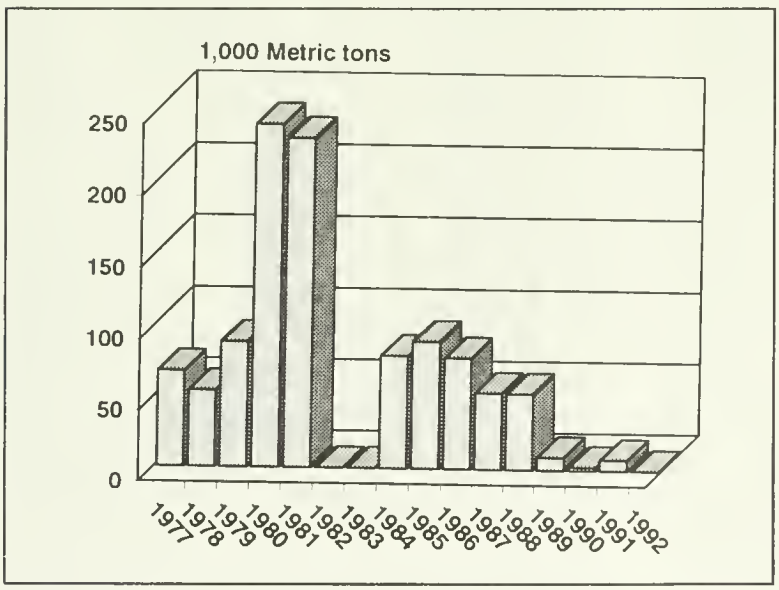


Figure 7. Poland. Fishery allocations in the U.S. EEZ, 1977-92.

The Polish Government rescinded the martial law regulations in 1984, and Polish fishermen were again allocated catch quotas in the United States' waters.[79] In 1987, the United States began to decrease (Atlantic mackerel, Pacific hake, etc.), or eliminate entirely (pollock, herring, Pacific cod, etc.), catch allocations to Polish fishermen in the U.S. 200-mile zone (appendix 16). By 1990, fishery allocations for Poles in the U.S. EEZ had dropped to only 2,431 t; in 1991, these allocations were reduced to zero .[80]

Vietnam: Negotiations were conducted in 1991 by the DALMOR representative in Vietnam who was trying to sell the Vietnamese a Polish vessel to be used as a fishery research vessel. The Polish Government is paying special attention to its fishery relations with Vietnam as it would like to establish a fishery base in Vietnam so that Polish crews fishing in the Pacific could be rotated by air, with repairs and maintenance of the vessels completed in Vietnamese shipyards. The Polish side is represented in Vietnam by the Department of Fisheries of the Ministry of Transportation and Maritime Economy, DALMOR company, and the Gdansk Shipyards. Polish relations with Vietnam fishery officials are facilitated by the fact that about a half of them were educated in Poland and can speak Polish.[81]

VIII. JOINT VENTURES

The conclusion of joint venture agreements is vital for the continuation of Polish high-seas fishing. Polish fishermen urgently need new distant-water fishing grounds on which to operate their substantial fleet. Over 10 joint venture contracts were concluded between 1989 and 1993 with Australian, Canadian, Danish, Dutch,

German, and Swedish companies. Most of these ventures were concluded between fish-processing companies, with two joint ventures (both with Danish companies) established for Baltic fishing.

Argentina: The Polish-Argentine joint venture, Arpolco, S.A., which was formed by ODRA company and the Argentine company Harengus, became operational in 1991. The details of its activities are not known.[82]

Peru: Polish fishing off Peru began in 1973 through a joint venture arranged by the Polish Fish-Exporting Company (RYBEX) in 1972. Under the terms of the agreement, the Polish fishermen were permitted to deploy vessels within Peru's 200-mile zone. The catch, however, was reported as part of the Peruvian catch as the vessels were reflagged to Peruvian ship registry. Polish-flag vessels first reported small catches in the southeast Pacific during 1979, even though their actual catch was nearly 200,000 tons.[83] The joint venture failed after the Peruvian Government implemented new restrictive hake fishing regulations in 1980.[84] This would have required the Poles to shift operations beyond Peru's 200-mile limit, but they instead negotiated joint venture arrangements with Peruvian companies permitting them continued operations in Peruvian waters. Polish-flag vessels did not report significant catches, however, until 1983 when they caught 40,000 t in the region (FAO statistical area 87). The Polish catch peaked at 80,000 t in 1984 after which Poland terminated the fishery. Polish fishery officials, however, continue to be interested in the southeastern Pacific and have met with Peruvian officials to discuss access.

Yemen: A fisheries agreement was signed in 1992 between the governments of Poland and Yemen followed by a letter of intent to establish a joint venture between the Polish high-seas fishing company, DALMOR, and a Yemeni fishing company. Included in this agreement is a cooperative project for joint research and training of Yemen's biologists at the Polish Marine Fisheries Institute (MIR) in Gdynia.[85]

IX. OUTLOOK

The future of Polish fisheries will depend on the government's ability to retain access to the high-seas fishing grounds where the Polish fleets operate today. The largest of these fisheries in the international waters of the western North Pacific is being threatened by the demands of the Russian Federation that the fishing there be severely curtailed, if not entirely stopped. The Russians maintain that the Alaska pollock stocks are in danger of being overfished, but the Poles counter that Russian biologists have not shown conclusive scientific evidence that this is the case. As a result, the Polish fleet of about 30-40 stern factory trawlers continues to fish there even though the government has made the concession of promising to reduce the total 1993 take by 25 percent below the 1992 catch. Continued pressure by Russian diplomats and fishery administrators, however, does not bode well for this fishery.

In the neighboring international waters of the central Bering Sea, a moratorium on Alaska pollock fishing was set by international consensus by six fishing nations, including Poland, for 1993 and 1994. The most recent scientific evidence shows no significant recruitment of new yearclasses and it is highly unlikely that any fishery will be allowed in this area for the next 3-5 years.

The small fisheries in the southwestern Atlantic around the Falkland Islands will probably continue, but the number of Polish vessels allowed to fish there will be minimal. The Antarctic krill resources are still abundant, but it remains to be seen is the economics of fishing in this distant ground will permit its continuation.

The Polish fishery managers realize that the future potential for the Polish high-seas fleet is at best limited and, at worst, threatened. They have begun a program of fleet reduction which has accelerated in recent years. An estimated 50 Polish vessels have recently been sold, scrapped, or reflagged. Many of these vessels were aged and unprofitable. If this program continues at the current pace, the Polish high-seas fleet will not only become "younger", but also more efficient and therefore more profitable. Recent information indicates that two our of three Polish high-seas fishing companies are in dire straits as their deficits keep increasing from year to year. It is not impossible that they will declare bankruptcy in the near future. One of them, the ODRA, has recently decommissioned one third of its high-seas fleet to try to survive.

One bright spot in this otherwise gloomy picture is the hard currency which the Polish high-seas fishermen have recently earned. In the past, these monies went to the Polish treasury, but if in the future the privatization of the fishing companies allows them to retain these earnings, they will at least be able to replace aged vessels with a few modern vessels which could operate profitably.

SOURCES

Dutkiewicz, Daniel and Zbigniew S. Karnicki. "The Polish Fishing Industry". Gdynia: MIR, 1993. (English translation of the Polish original)

"Empty Nets," *Zycie Gospodarcze* (Warsaw) No. 22, 30 May 1993, p. 4.

FAO. *Yearbook of Fishery Statistics: Catches and Landings*. Rome, various years.

Gwiazda, Adam. "Uncertain Future for the Polish Fishing Industry." *World Fishing*, February 1993, pp. 38-39.

Karnicki, Z.S. "Nie ma juz wolnych lowisk [There are no more free fishing grounds]. *Budownictwo Okretowe i Gospodarka Morska* (Gdansk), May-June 1993. (In Polish)

Karnicki, Z.S. and D. Dutkiewicz. "The State of the Polish Fishing Industry." Published in *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia*. London: Agra Europe, 1993.

Organization for Economic Cooperation and Development (OECD), "Review of Fisheries, 1990: Poland." Paris, 1991.

Polanski, Zygmunt. "The Fishing Industry in Poland," *FAO/GLOBEFISH Research Programme*, Vol. 19. Rome: FAO, 1993.

Polanski, Z. "The Polish Fishery in 1991," *Bulletin of the Sea Fisheries Institute*. No. 2. Gdynia: MIR, 1993.

"The Polish Fishing Industry," *World Fishing*, February 1993, pp. 33-34.

U.S. Navy, Office of Naval Intelligence, 27 July 1993.

U.S. Embassy, Warsaw. Letter of 17 July 1993 enclosing an unpublished manuscript.

ENDNOTES

1. D. Dutkiewicz and Z.S. Karnicki. "The Polish Fishing Industry," Gdynia: MIR, 1993. (English translation of the Polish original).

2. Ibid. While only 32,000 persons are actually directly employed in the fishing industry, Dr. Karnicki, the President of the Polish Development Association (prior to his recent resignation to accept a position with FAO in Rome) estimated in an article presented at the First East-West Fisheries Conference in May 1993 in St. Petersburg, Russia, that "the fishing industry provides a living for about 100,000 persons." An article in *Zycie Gospodarcze* of 30 May 1993 implies that the figure of 100,000 refers to "... people together with families..." of the 3 large high-seas fishing companies.

3. In 1991, the Polish Statistical Bureau reported the consumption of fishery products at 6.2 kilograms per person.

4. Z.S. Karnicki and D. Dutkiewicz. "The State of the Polish Fishing Industry." Published in: *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia.* (London: Agra Europe), 1993.

5. Z. Polanski, "The Fishing Industry in Poland," Published in: *FAO/GLOBEFISH Research Programme*, Vol. 19, Rome, 1993, p. 10. The Polish Government did continue to extend some fisheries assistance in such areas as fishing port maintenance, vocational training of fishermen, fisheries research, etc.

6. Organization for Economic Cooperation and Development (OECD), "Review of Fisheries, 1990: Poland." Paris, 1991.

7. Ibid.

8. This figure was also confirmed in appendix 4 and the vessels are listed in great detail in appendix 8.

9. The authors have decided to publish the list of Polish fishery vessels, kindly supplied by the U.S. Office of Naval Intelligence, because it was the most complete in listing every vessel by its name, class, and gross registered tonnage. The official submission by the Polish Government (appendices 5 & 6) had no such detail even though it was more accurate in giving the total number of vessels. A recent report by Z. Polanski in the *Bulletin of the Sea Fisheries Institute* listed 20 Polish trawlers that were decommissioned in 1990 and 1991. This information was incorporated in appendices 7 and 10.

10. Dutkiewicz and Karnicki, *op. cit.*

11. Ibid. Since these large vessels are equipped with refrigeration, they could be used in transporting non-fishery commodities that require refrigeration. One reason for this development is the fact that most Polish vessels fish in thousands-of-miles-distant Pacific grounds. It would be uneconomical to send a large transport vessel to tranship their catch when foreign carriers can accept their products as convenience cargo. In the past, under the command system, high-seas fishery companies had to use Polish transports regardless of the cost and regardless of other closer and cheaper transportation.

12. Appendix 7 gives the age of the Polish high-seas fishing vessels as well as their names and classes.

13. Polanski, *op. cit.*

14. Z.S. Karnicki, "Nie ma juz wolnych lowisk" *Budownictwo Okretowe i Gospodarka Morska* (Gdansk), May-June 1993, p. 3.

15. Among them were 5 large stern factory trawlers having over 2,000 GRT each and 7 smaller trawlers. A large fish carrier was also withdrawn from operations. The final disposition of these vessels is unknown, but it is likely that some were reflagged and others scrapped.

16. For a full discussion of flag-of-convenience registrations, see Volume 4 of this report, Weidner and Hall, Latin America Overview, pp. 20-27.

17. Karnicki, *Budownictwo Okretowe i Gospodarka Morska*, *op cit.*

18. U.S. Embassy, Warsaw, letter of July 17, 1993 enclosing an unpublished manuscript.

19. Ibid.

20. *Budownictwo Okretowe i Gospodarka Morska*, January-February 1993, p. 16.

21. U.S. Embassy, Warsaw, *op. cit.*

22. "The Polish Fishing Industry," *World Fishing*, February 1993, pp. 33-34. This article is one of the better recent reviews of the situation prevailing in Polish fisheries.

23. U.S. Embassy, Warsaw, *op. cit.*

24. *Eurofish Report*, 22 April 1993. The Russians were offering herring at about zloty 1,000 per kilogram, vastly undercutting the Polish market price of zloty 4,000. Interestingly, a Norwegian vessel was nevertheless allowed to enter and sell haddock and mackerel as those two species are not being fished by Polish fishermen and were therefore not considered a competitive threat.

25. The managers of the Dalmor company had asked the Polish Fisheries Institute (MIR) technologists to construct a krill-peeling machine. The project was successful and, in 1992, frozen, peeled krill was exported to the United States where a fish-processing company is using the raw material to make krill burgers.

26. U.S. Embassy, Warsaw, *op. cit.*

27. "The Polish Fishing Industry," *World Fishing*, *op. cit.*

28. FAO, *Yearbook of Fishery Statistics: Catches and Landings*. Rome, various years.

29. "Empty Nets," *Zycie Gospodarcze* (Warsaw) 22, May 1993, p. 4.

30. Polanski, *op. cit.*

31. Russian Fisheries Attache, Personal Communication, 14 March 1993.

32. Dutkiewicz and Karnicki, *op. cit.*

33. "Report of Member's Activities in the Convention Area 1990/1991: Poland." CCAMLR. 3 September 1991.

34. Dutkiewicz and Karnicki, *op. cit.*

35. *Eurofish Report*, 24 October 1991.

36. Dutkiewicz and Karnicki, *op. cit.* ; *Eurofish Report*, April 9, 1992.

37. Adam Gwiazda, "Uncertain Future for the Polish Fishing Industry." *World Fishing*, February 1993, pp. 38-39. Most of this catch was harvested in the so-called peanut-hole in the international waters in the Sea of Okhotsk. Gwiazda's article is one of the best recent presentations of the current situation in the Polish fishing industry.

38. Ibid. The Italian company is PESCALAUDIO from Milan. The joint venture is named DALPESCA.

39. Ibid. The joint venture company is named DALREM which stands for DALMOR/REMONT (repairs).

40. "Dalmor - No. 1 in Poland," *World Fishing*, February 1993, p. 37. The $68 million earned in foreign currencies were payments for the export of Alaska pollock in frozen blocks, minced form, or reduced to fishmeal.

41. *World Fishing*, February 1991, p. 15.

42. Gwiadza, *op. cit.*

43. "Empty Nets," *Zycie Gospodarcze* (Warsaw) No. 22, dated 30 May 1993, p. 4.

44. *Eurofish Report*, 23 April 1993.

45. Dutkiewicz and Karnicki, *op. cit.*

46. *Eurofish Report*, 23 May 1991.

47. "The Polish Fishing Industry," *World Fishing*, *op. cit.*

48. The processing and canning of fish in Poland was monopolized by the ZAKLADY RYBNE, while the CENTRALA RYBNA had a monopoly on fish marketing and owned, until recently, most of the fish retail stores.

49. "The Polish Fishing Industry," *op. cit.*, p.34

50. Ibid.

51. Dutkiewicz and Karnicki, *op. cit.*

52. Ibid.

53. Karnicki and Dutkiewicz, *op. cit.*

54. Personal Communication to M. Kravanja, 1991.

55. *World Fishing*, February 1993.

56. *Eurofish Report*, 22 April 1993.

57. "The Fishing Agreement with Poland," *La Prensa*, 7 August 1974, p. 4.

58. "British May Have Sunk Polish Fishing Vessel," Noticias Argentinas, 0309 GMT, 5 May 1982. The reliability of the Argentinean source is not known. There was no confirmation of this story from any other available source.

59. "Explica a Polonia la Prohibición de Pescar," *La Voz*, 13 September 1983; "Buques de Polonia no Podrán Trasbordar Capturas Pesqueras," *La Prensa*, 9 September 1983; "Revocan Authorización a Pesqueros Polaco," *La Nacion*, 7 September 1983.

60. "Preocupa la Presencia de Pesqueros Polacos," *Navitecnia*, April 1983, p. 8; "Entró al Puerto de Bahía Blanca un Pesquero de Bandera Polaca," *La Nacion*, 29 July 1983, p. 12.

61. "The Polish Fishing Industry," *World Fishing*, *op. cit.*

62. Milan Kravanja and Forrest Nielsen, "East European Fisheries Trade with the United States, 1980-91," *International Fisheries Report* 91\101, National Marine Fisheries Service, December 31, 1991.

63. Ibid.

64. Personal communication to M. Kravanja, 29 October 1993.

65. The Poles were also active off neighboring Peru. For details see the Peruvian chapter of Volume 4.

66. "Poles Switch to South Atlantic Squid Grounds," *Eurofish Report*, 6 October 1982, 16.

67. Jeremy Cherfas, "The Last Great Free-for-all at Sea," *New Scientist*, 7 November 1985, 18-19.

68. "Poland breaks ranks with USSR and applies for Falkland licenses," *Eurofish Report*, 10 December 1987.

69. "Falkland Hostility to Argentina Still Strong," *Daily Yomiuri*, 20 February 1986.

70. *Seafood International*, August 1993.

71. Falkland Islands Fishery Department, 1993.

72. "The Polish Fishing Industry," *World Fishing*, *op. cit.*

73. Kaliningrad teletype for Seamen, 18 December 1987.

74. *Eurofish Report*, 22 April 1993.

75. Ibid.

76. U.S. Embassy, Warsaw, *op. cit.*

77. U.S. Department of State, November 1991.

78. Kravanja and Nielsen, *op. cit* .

79. Ibid.

80. *Fisheries of the United States, 1991*, U.S. Department of Commerce, NOAA, NMFS. Washington, DC, 1992.

81. *Budownictwo Okretowe i Gospodarka Morska, op. cit.*

82. "Defender el Pabelon es Garantizar el Crecemiento," *Redes*. No. 54, 1991, pp. 34-5.

83. *Technika i Gospodarka Morska*, October 1980.

84. U.S. Embassy, Warsaw, 10 December 1982.

85. *Budownictwo Okretowe i Gospodarka Morska, op. cit.*

86. Ibid.

Appendix 1. Poland. Number of high-seas fishing and fishery support vessels, 1975-92.

Year	Fishing	Support	Total
	Number of vessels		
1975	144	7	151
1976	149	9	158
1977	162	9	171
1978	165	9	174
1979	154	9	163
1980	147	10	157
1981	131	10	141
1982	120	11	131
1983	111	11	122
1984	105	11	116
1985	100	12	112
1986	99	13	112
1987	96	13	109
1988	94	14	108
1989	91	17	108
1990	90	15	105
1991	83	14	97
1992	73	12	85

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

Appendix 2. Poland. Number of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)			Total
	500-999	1,000-1,999	Over 2,000	
	Number of vessels			
1975	67	27	50	144
1976	61	29	59	149
1977	61	29	72	162
1978	61	29	75	165
1979	50	29	75	154
1980	43	29	75	147
1981	29	27	75	131
1982	27	27	66	120
1983	23	26	62	111
1984	20	24	61	105
1985	19	23	58	100
1986	18	23	58	99
1987	16	21	59	96
1988	15	21	58	94
1989	13	20	58	91
1990	9	20	61	90
1991	6	19	58	83
1992	4	12	57[1]	73

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

[1] Includes 1 vessel over 4,000 gross registered tons.

Appendix 3. Poland. Number of high-seas fishery support vessels, ranked by tonnage; 1975-92.

Year	Gross Registered Tons (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Over 4,000	
	Number of Vessels				
1975	-	-	-	7	7
1976	-	-	-	9	9
1977	-	-	-	9	9
1978	-	-	-	9	9
1979	-	-	-	9	9
1980	-	1	-	9	10
1981	-	-	1	9	10
1982	-	-	1	10	11
1983	-	-	2	9	11
1984	-	-	2	9	11
1985	-	-	3	9	12
1986	-	-	4	9	13
1987	-	-	4	9	13
1988	-	-	4	10	14
1989	-	-	4	13	17
1990	-	-	4	11	15
1991	-	-	4	10	14
1992	-	-	4	8	12

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, various years.

Appendix 4. Poland. Fishing fleet by type of vessel, number and gross registered tonnage: 1990-91

Type of vessel	1990		1991	
	Number	GRT	Number	GRT
TRAWLERS				
0-24 GRT	5	112	2	44
25-49 GRT	212	8,583	214	8,551
50-99 GRT	33	2,585	43	3,308
100-149 GRT	175	18,925	178	19,299
150-249 GRT	16	2,855	19	3,304
Subtotal	441	33,060	456	34,506
500-999 GRT	5	3,981	1	796
1,000-1,999 GRT	15	21,466	12	17,065
2,000-GRT and over	57	157,840	52	146,346
Subtotal	77	183,287	65	164,207
TOTAL, TRAWLERS	518	216,347	521	198,713
FISH CARRIERS				
1,000-1,999 GRT	1	1,689	1	1,686
2,000-3,999 GRT	4	11,065	4	11,065
4,000-9,999 GRT	9	69,060	8	60,196
TOTAL, FISH CARRIERS	14	81,814	13	72,947
MOTHERSHIPS				
1,000-9,999 GRT	2	27,747	2	27,747
Non-motorized vessels	79		91	

Source: Organization for Economic Cooperation and Development, Poland: Fishing Fleet and Fishermen, p. 181

Appendix 5. Poland. Fishing and fishery support vessels, by gross registered tonnage: 1980, 1985-92.

Gross Tonnage	Year								
	1980	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels								
Baltic sea vessels									
100-200 GRT	203	200	189	181	175	171	191	197	191
200-500 GRT	-	-	-	-	-	-	-	-	-
High-seas vessels									
500-1,000 GRT	13	11	11	11	8	8	5	1	-
1,000-2,500 GRT	83	57	57	57	54	51	45	39	32
over 2,500 GRT	30	36	36	38	41	43	43	40	34
Subtotal	125	104	104	106	103	99	93	80	66
TOTAL	329	304	293	287	278	270	284	277	257
Average Age	10.9	13.4	13.9	14.0	14.4	14.7	15.4	16.0	16.7

Source: Department of Sea Fisheries, Polish Ministry of Transportation and Maritime Economy, June 1993

Appendix 6. Poland. Fishing and fishery support vessels, by type and number of vessels: 1980, 1985-92.

Type of vessel	Year								
	1980	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels								
Trawlers	309	282	270	265	254	248	267	262	244
Jiggers	10	8	9	6	7	4	1	-	-
Transports	8	12	12	14	15	16	14	13	13
Motherships	2	2	2	2	2	2	2	2	-
TOTAL	329	304	293	287	278	270	284	277	257

Source: Department of Sea Fisheries, Polish Ministry of Transportation and Maritime Economy, June 1993.

Appendix 7. Poland. High-seas fishing trawlers, by class and name of vessel, gross registered tonnage, year and country of construction, age, and owner.

Class/ Vessel name	Gross Tonnage	Built Year	Built Country	Age (Years)	Owner (Company)
AQUILA (B-407) - 3 vessels (age: 11 years)					
Aquarius	3,719	1983	Poland	10	DALMOR
Aquila	3,724	1981	Poland	12	GRYF
Cassiopeia	3,724	1982	Poland	11	GRYF
ATRIA (B-671) - 4 vessels (age: 3.2 years)					
Acamar	3,708	1990	Poland	3	DALMOR
Acrux	3,707	1990	Poland	3	DALMOR
Alphard	3,707	1991	Poland	3	DALMOR
Atria	3,707	1989	Poland	4	DALMOR
B-14 - 1 vessel (age: 36 years)					
Emilia Gierczak*	692	1957	Poland	36	Not in service in 1991
CARINA (B-22) - 7 vessels (age: 24.1 years)					
Carina**	2,645	1966	Poland	27	DALMOR
Lacerta	2,691	1968	Poland	25	DALMOR
Lepus	2,691	1969	Poland	24	DALMOR
Libra	2,693	1967	Poland	26	DALMOR
Lyra	2,687	1968	Poland	25	DALMOR
Taurus	2,690	1972	Poland	21	DALMOR
Tucana	2,691	1972	Poland	21	DALMOR
FOKA (B-18) - 3 vessels (age: 27 years)					
Kaszalot	2,478	1968	Poland	25	ODRA
Narwal	2,480	1967	Poland	26	ODRA
Pletwal#	2,495	1964	Poland	29	ODRA
IVAN BOCHKOV (B-408) - 2 vessels (age: 6.5 years)					
Altair	3,810	1987	Poland	6	DALMOR
Dalmor II	3,861	1986	Poland	7	DALMOR
KALMAR (B-418) - 13 vessels (age: 18.5 years)					
Amarel	2,448	1977	Poland	16	ODRA
Awior	2,448	1977	Poland	16	ODRA
Bogar	2,448	1977	Poland	16	ODRA
Bonito	2,448	1976	Poland	17	GRYF
Delfin	2,448	1975	Poland	18	ODRA
Garnela	2,448	1971	Poland	22	ODRA
Grinwal	2,476	1972	Poland	21	GRYF
Hajduk	2,448	1977	Poland	16	ODRA
Kalmar	2,448	1970	Poland	23	GRYF
Mors	2,501	1971	Poland	22	ODRA
Parma	2,448	1977	Poland	16	GRYF
Rekin	2,448	1976	Poland	17	GRYF
Walen	2,476	1972	Poland	21	ODRA
KALMAR MODEL A (B-417) - 9 vessels (age: 16.8 years)					
Kolias	2,395	1977	Poland	16	ODRA
Manta	2,395	1976	Poland	17	ODRA
Marlin	2,410	1977	Poland	16	ODRA
Mustel	2,395	1977	Poland	16	ODRA
Orcyn	2,395	1976	Poland	17	ODRA
Orlen	2,395	1976	Poland	17	ODRA
Otol	2,395	1976	Poland	17	ODRA
Tazar	2,395	1975	Poland	18	ODRA
Tunek	2,395	1976	Poland	17	ODRA

Appendix 7. Poland. Continued.

Class/ Vessel name	Gross Tonnage	Built Year	Built Country	Age (Years)	Owner (Company)
LANGUSTA (B-673) - 4 vessels (age: 3.0 years)					
Foka	3,981	1991	Poland	2	ODRA
Homar	3,600	1990	Poland	3	ODRA
Langusta	3,986	1989	Poland	5	ODRA
Sagrain#	3,965	1991	Poland	2	ODRA
LASKARA (B-29) - 11 vessels (age: 22.7 years)					
Kabryl#	1,435	1971	Poland	22	GRYF
Kanaryjka##	1,480	1968	Poland	25	GRYF
Kantar##	1,480	1969	Poland	24	GRYF
Kniazik##	1,482	1969	Poland	24	GRYF
Kolen	1,485	1969	Poland	24	GRYF
Korwin##	1,485	1969	Poland	24	GRYF
Kunatka	1,435	1972	Poland	21	GRYF
Laskara##	1,479	1968	Poland	25	GRYF
Laterna	1,434	1972	Poland	21	GRYF
Likosar	1,435	1973	Poland	20	GRYF
Luzytanka##	1,435	1973	Poland	20	GRYF
LESKOV (B-23) - 1 vessel (age: 29 years)					
Andromeda	2,305	1964	Poland	29	ODRA
MIEDWIE (B-20) - 3 vessels (age: 31 years)					
Goplo	797	1962	Poland	31	ODRA
Jasien#	797	1962	Poland	31	ODRA
Mielno###	797	1961	Poland	31	ODRA
RYBAK MORSKI (B-89) - 2 vessels (age: 16 5 years)					
Adm. Arcziszewski*	2,620	1977	Poland	16	ODRA
Rybak Morski*	2,599	1976	Poland	17	GRYF
VEGA (B-419) - 3 vessels (age: 19 6 years)					
Denebola	2,564	1973	Poland	20	DALMOR
Gemini	2,680	1973	Poland	20	DALMOR
Sirius	2,564	1974	Poland	19	DALMOR
WLOCZNIK (B-414) - 5 vessels (age: 16 8 years)					
Arcturus	2,584	1977	Poland	16	DALMOR
Pollux	2,584	1976	Poland	17	DALMOR
Regulus	2,584	1976	Poland	17	DALMOR
Sagitta	2,584	1977	Poland	18	DALMOR
Wlocznik	2,584	1975	Poland	17	ODRA
UNKNOWN -1 vessel (age: 2 years)					
Dorada	2,360	1991	Poland	2	?

TOTAL = 72 vessels TOTAL GROSS TONNAGE = 177,996 GRT

Sources. U.S Navy, Office of Naval Intelligence, 27 July 1993
Polanski, Z. "The Polish Fishery in 1991," *Bulletin of the Sea Fisheries Institute*, No 2, 1993 (for vessels sold or inactive)

* The Emilia Gierczak, a refrigerated side trawler, is reportedly no longer operational, but its disposition is unknown This vessel, along with the 2 RYBAK MORSKIs, was reportedly used as fishery training vessel.
** According to Polanski, this vessel was removed from service in 1991 because of unprofitability
# According to Polanski , this vessel was sold in 1991
According to Polanski, these vessels were removed from service and put up for sale in 1991
This vessel was removed from service in 1990

Appendix 8. Poland. High-seas fishery support vessels, by class and name of vessel, gross tonnage, and year and country of construction: 1993.

Class/ Vessel name	Gross Tonnage	Built Year	Built Country
HALNIAK -2 vessels			
Buran	5,126	1972	Poland
Halniak	5,126	1971	Poland
HARMATTAN -1 vessel			
Harmattan	1,686	1966	Germany
KOCIEWIE -2 vessels			
Kociewie	8,833	1986	Poland
Powisle	8,864	1987	Poland
TERRAL -4 vessels			
Solana	3,126	1984	Poland
Terral	2,297	1980	Poland
Tornada	3,126	1985	Poland
Zonda	2,298	1982	Poland
ZULAWY (B-68) -4 vessels			
Kaszuby II	8,032	1976	Poland
Mazury	8,023	1981	Poland
Wineta	8,032	1976	Poland
Zulawy	8,120	1975	Poland
TOTAL = 13 vessels	GROSS TONNAGE = 72,689 GRT		

Source: U S Navy, Office of Naval Intelligence, 27 July 1993

Appendix 9. Poland. Fishing and fishery support fleet, by vessel class, number of vessels, total and average gross tonnage, and country and year of construction: 1951-93.

Vessel class	Number of Vessels	Gross Tonnage		Construction	
		Total	Average	Country	Years
AQUILA (B-407)	3	11,167	3,772	Poland	1981-83
ATAIR	13	1,378	106	Poland	1978-79
ATRIA (B-671)	4	14,122	3,530	Poland	1989-90
B-14	1	692	692	Poland	1957
CARINA (B-22)	7 (6)	18,788	2,684	Poland	1966-72
FOKA (B-18)	3 (2)	7,453	2,484	Poland	1964-68
HALNIAK	2	10,252	5,126	Poland	1971-72
HARMATTAN	1	1,686	1,686	Germany	1966
HEL 150	9	1,754	194	Poland	1988-90
IVAN BOCHKOV (B-408)	2	7,671	3,835	Poland	1986-87
KALMAR (B-418)	13	31,933	2,456	Poland	1971-77
KALMAR MOD A (B-417)	9	21,570	2,396	Poland	1975-77
KOCIEWIE	2	17,697	8,848	Poland	1986-87
LANGUSTA (B-673)	4 (3)	15,532	3,883	Poland	1989-91
LASKARA (B-29)	11	16,065	1,460	Poland	1968-73
LESKOV (B-23)	1	2,305	2,305	Poland	1964
MIEDWIE (B-20)	3 (1)	2,391	794	Poland	1961-62
RENLAND	1	216	216	Sweden	1973
RYBAK MORSKI (B-89)	2	5,219	2,609	Poland	1976-77
TERRAL	4	10,847	2,711	Poland	1980-85
TYPE B 11	1	165	165	Poland	1953
TYPE B 25	1	119	119	Poland	1968
TYPE B 25S	109	11,544	105	Poland	1959-76
TYPE TR 27	1	185	185	Poland	1967
VEGA (B-419)	3	7,808	2,602	Poland	1973-74
WLA 300	64	7,636	119	Poland	1976-83
WLOCZNIK (B-414)	5	12,920	2,584	Poland	1975-77
ZULAWY	4	32,207	8,051	Poland	1976-1981
UNSPECIFIED	17	4,965	292	Poland	N/A
UNSPECIFIED	1	143	143	Denmark	1968
UNSPECIFIED	2	226	113	Netherlands	1960, 67
UNSPECIFIED	1	150	150	GDR	1968
TOTAL NUMBER = 300 vessels		TOTAL GROSS TONNAGE = 276,287 GRT			

Source: U.S. Navy, Office of Naval Intelligence, July 1993.

GDR - former German Democratic Republic (East Germany)

Note: The figures in parentheses indicate the number of vessels remaining in that class on 31 December 1991, according to an article by Prof. Z. Polanski published in the Bulletin of the Sea Fisheries Institute, No 2 (1993), and received only a day before finalizing the report.

Appendix 10. Poland. High-seas fleet reduction, by vessel name and class, gross registered tonnage, year and country of construction, and disposition; 1993.

Vessel name	Class	Tonnage	Year Built	Built In	New Flag
VESSELS REFLAGGED					
Aishi I	FOKA	2,480	1968	Poland	Nigeria
Chiquita Abava	N/A	7,390	1992	Poland	Cyprus
Cidade de Aveiro	LASKARA	1,478	1969	Poland	Panama*
Cidade de Ilhavo	LASKARA	1,480	1968	Poland	Panama*
Fu Xing Hai	KALMAR MOD B	2,374	1977	Poland	China
Gafanha Do Carma	LASKARA	1,485	1969	Poland	Panama*
Galina	LANGUSTA	4,038	1992	Poland	Cyprus**
Garbis	MIEDWIE	797	1962	Poland	Germany
Glory	CARINA	2,677	1970	Poland	Nigeria
Gregos	ALBAKORA	999	1964	Poland	Germany
Humbak	KALMAR	2,448	1970	Poland	Argentina
Kai Fa	WLOCZNIK	2,584	1977	Poland	China
Kai Feng	WLOCZNIK	2,603	1976	Poland	China
Kulbak	LASKARA	1,435	1972	Poland	Russia
Kurpie	KOCIEWIE	8,864	1988	Poland	Cyprus***
Mamry	MIEDWIE	797	1961	Poland	Honduras
Mamry II	MIEDWIE B 20	766	1961	Poland	Honduras
Mapuche	LASKARA	1,480	1968	Poland	Argentina
Marlin	KALMAR MOD A	2,410	1977	Poland	N/A
Nor-Fisk I	VEGA	2,564	1973	Poland	Malta#
Nor-Fisk II	VEGA	2,680	1973	Poland	Malta#
Ostria	MIEDWIE	797	1961	Poland	Germany
Peace	AL8AKORA	1,005	1963	Poland	St. Vincent
Podlasie	KOCIEWIE	8,886	1988	Poland	Liberia***
Porto de Aveiro	LASKARA	1,482	1969	Poland	Panama*
Smaragd	SMARAGD	757	1978	Norway	Norway
Snow Goose	ALBAKORA	1,000	1963	Poland	St Vincent
Tehuelche	LASKARA	1,434	1972	Poland	Argentina
SUBTOTAL = 28 vessels		GROSS TONNAGE = 69,190 GRT			
VESSELS DECOMMISSIONED					
Antares	WLOCZNIK	2,584	1967(E)	Poland	N/A
Gryf Pomorski	GRYF POMORSKI	13,872	1966	Poland	N/A
Indus	WLOCZNIK	2,584	1967(E)	Poland	N/A
Jamno	MIEDWIE	797	1962	Poland	Sold
Likodyn	LASKARA	1,460(E)	1970(E)	Poland	Sold
Likomur	LASKARA	1,460(E)	1970(E)	Poland	Sold
Morag	MIEDWIE	797	1961	Poland	Sold
Pomorze	GRYF POMORSKI	13,875	1967	Poland	N/A
Prof Bogucki	KALMAR MOD A	2,395(E)	1976(E)	Poland	N/A
Prof Siedlecki##	PROF SIEDLECKI	2,798	1970	Poland	Scrapped
Smiardwy	MIEDWIE	797	1961	Poland	Sold
SUBTOTAL = 11 vessels		GROSS TONNAGE = 43,419 GRT			
TOTAL = 39 vessels		TOTAL GROSS TONNAGE = 112,609 GRT			

Sources U.S. Navy, Office of Naval Intelligence, 27 July 1993, Polanski, Z. "The Polish Fishery in 1991." *Bulletin of the Sea Fisheries Institute*, No. 2, 1993

N/A - Not available
E- Estimated
* The current owner is listed as Portugal
** The current owner is listed as the Russian Federation
*** The current owner is listed as Poland
# The current owner is listed as the United Kingdom
This world-renowned research vessel, built with the help of FAO 2 decades ago, was scrapped in 1992

Note The list does not include a trawler decommissioned by the GRYF company which fished in 1986 off the U.S. Atlantic coast (*Lutjan*). It also does not include 13 trawlers sold or decommissioned in 1991 which are listed in appendix 7

Appendix 10A. Poland. Fishery vessels removed from the Polish registry in 1991.

Company/Vessel type	Vessel name	Number	Vessel class	GRT	Year Built
DALMOR:					
B-22	Carina	1	CARINA	2,645	1966
B-414	Antares	2	WLOCZNIK	2,584	1977(?)
	Indus			2,584	1976(?)
B-417	Prof. Bogucki	1	KALMAR-A	2,395	1975(?)
SUBTOTAL VESSELS:		4	SUBTOTAL GRT:	10,208	
ODRA:					
B-20	Jamno	4	MIEDWIE	797	1962(?)
	Jasien		MIEDWIE	797	1961(?)
	Morag		MIEDWIE	797	1962(?)
	Sniardwy		MIEDWIE	797	1962(?)
B-18	Pletwal	1	FOKA	2,495	1964
B-418	Humbak	1	KALMAR	2,448	1971(?)
SUBTOTAL VESSELS:		6	SUBTOTAL GRT:	8,131	
GRYF:					
B-29	Likodyn	10	LASKARA	1,435	1969(?)
	Kabryl		LASKARA	1,435(?)	1971
	Likomur		LASKARA	1,480(?)	1969(?)
	Laskara		LASKARA	1,479	1968
	Kantar		LASKARA	1,480	1968
	Kanaryjka		LASKARA	1,480	1968
	Korwin		LASKARA	1,485	1969
	Luzytanka		LASKARA	1,435	1973
	Kniazik		LASKARA	1,482	1968
	Kulbak		LASKARA	1,480(?)	1968(?)
SUBTOTAL VESSELS:		10	SUBTOTAL GRT:	14,671	
	TOTAL	20 VESSELS		33,010 GRT	

Source: Polanski, Z. "The Polish Fishery in 1991." *Bulletin of the Sea Fisheries Institute*, No. 2, 1993, pp. 3-4.

NOTE: All vessels were built in Polish shipyards.

Appendix 11. Poland. Construction of fishery vessels in Polish shipyards, by country and number of vessels: 1980, 1985-92.

Country	Year								
	1980	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels								
FISHING VESSELS									
Poland	13	-	1	1	2	7	10	3	1
USSR	8	8	7	6	3	-	-	-	-
Niger	7	-	-	1	7	6	2	1	-
Iraq	1	-	-	-	-	-	-	-	-
Netherlands	-	1	2	1	1	-	-	-	-
Iran	-	-	-	-	-	-	3	5	-
Iceland	-	-	-	-	-	2	2	-	-
Faroe Islands	-	-	-	-	-	-	2	-	-
Subtotal	29	9	10	9	13	15	19	9	1
FISHERY TRANSPORTS									
Poland	1	2	1	1	2	-	-	-	-
Cyprus	-	-	-	-	-	-	-	1	-
Subtotal	1	2	1	1	2	-	-	1	-
TOTAL	30	11	11	10	15	15	19	10	1

Source Poland Ministry of Transportation, June 1993

Appendix 12. Poland. Construction of fishery vessels in Polish shipyards, by country and gross registered tonnage: 1980, 1985-92.

Country	Year								
	1980	1985	1986	1987	1988	1989	1990	1991	1992
	Gross registered tons								
FISHING VESSELS									
Poland	1,326	-	3,861	3,862	356	8,580	16,449	4,027	143
USSR	27,776	5,559	1,743	5,061	10,564	-	-	-	-
Niger	287	-	-	144	1,106	948	316	158	-
Iraq	2,405	-	-	-	-	-	-	-	-
Netherlands	-	442	942	498	n/a	-	-	-	-
Iran	-	-	-	-	-	-	360	600	-
Iceland	-	-	-	-	-	1,640	778	-	-
Faroe Islands	-	-	-	-	-	-	572	-	-
Subtotal	31,794	6,001	6,546	9,565	12,026	11,168	18,475	4,785	143
FISHERY TRANSPORTS									
Poland	2,297	6,471	8,864*	8,864*	17,750	-	-	-	-
Cyprus	-	-	-	-	-	-	-	7,392	-
Subtotal	2,297	6,471	8,864	8,864	17,750	-	-	7,392	-
TOTAL	34,091	12,472	15,410	18,429	29,776	11,168	18,475	12,177	143

Source Poland Ministry of Transportation, June 1993

* The 2 refrigerated transports built in 1986 and 1987 were of the KOCIEWIE class (see appendix 8) The 2 refrigerated fish transports and baseships of the KOCIEWIE class constructed in 1988 (a total of 17,750 gross tons),were reflagged to foreign registration The *Kurpie* went to Cyprus, while the *Podlasia* was reflagged to Liberia

Appendix 13. Poland. Inland, coastal, and distant-water fisheries, by FAO statistical areas; 1975, 1980, and 1985-1992.

Area	Year									
	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric tons									
Inland (05)	23.3	18.7	28.9	29.4	30.7	34.2	34.2	45.0	48.0	51.0
Coastal (27)	333.7	235.7	179.0	158.1	138.7	127.6	119.7	112.0	103.9	104.9
Distant Water										
21	187.6	4.6	7.9	7.1	7.6	11.9	9.3	0.5	-	-
31	3.0	-	-	-	-	-	-	-	-	-
34	92.3	78.8	-	-	-	-	-	-	-	-
41	-	94.0	190.1	167.7	165.2	130.9	106.7	86.5	59.4	42.5
47	76.2	72.7	64.3	20.4	35.0	-	-	-	-	-
48	-	17.9	5.7	6.0	4.5	6.8	7.0	1.8	9.6	17.3
57	-	0.3	-	-	-	-	-	-	-	-
58	-	0.4	-	-	-	-	-	-	-	-
61	-	-	115.9	163.2	230.3	298.7	268.6	223.5	230.6	297.7
67	58.7	116.0	91.7	93.2	58.8	44.8	19.3	3.8	5.9	-
77	25.8	-	-	-	-	-	-	-	-	-
81	-	0.4	-	-	-	-	-	-	-	1.0
87	-	0.5	-	-	-	-	-	-	-	-
Subtotal	443.6	385.6	475.6	457.6	501.4	493.1	410.9	316.1	305.5	358.5
Total	800.9	644.0	683.5	645.2	670.9	654.9	564.8	473.1	457.4	514.4

Source: FAO. *Yearbook of Fishery Statistics: Catches and Landings*; Rome, various years.

Note: The totals may not add because of rounding.

Key to FAO statistical fishing areas:

27 - Northeast Atlantic (includes Baltic Sea)

21 - Northwest Atlantic (off the United States and Canada)
31 - Western Central Atlantic (the Caribbean)
34 - Eastern Central Atlantic (off West Africa)
41 - Southwest Atlantic (off Brazil, Argentina, and the Falklands)
47 - Southeast Atlantic (off Angola, Namibia, and South Africa)
48 - Antarctic, Atlantic
57 - Eastern Indian Ocean (waters from Burma to Australia)
58 - Antarctic, Indian Ocean
61 - Northwest Pacific (off Russian Far Eastern Coast)
67 - Northeast Pacific (off the U.S. West Coast and Alaska)
77 - Eastern Central Pacific (waters between Hawaii and U.S. and Mexican coasts)
81 - Southwest Pacific (off East Australia and New Zealand)
87 - Southeast Pacific (off western coast of S. America, Chile, Peru)

Appendix 14. Poland. Fisheries catch off the Falkland Islands, by species and quantity; 1987-1992.

Species	Year					
	1987	1988	1989	1990	1991	1992
	in metric tons					
Squid						
Loligo	24,280	7,569	10,134	6,579	11,234	9,275
Illex	19,618	32,852	19,753	3,382	7,234	7,250
Subtotal	43,898	40,421	29,887	9,961	18,468	16,525
Hake	1,396	543	1,613	457	218	49
Blue Whiting	46,908	42,486	30,073	49,649	23,920	14,901
Hoki	18,603	8,925	7,331	4,130	1,281	1,500
Other	952	1,167	242	83	32	12
Total*	111,757	93,542	69,146	64,279	43,908	32,987

Source: Falklands Fisheries Department, 1993

* Includes 328 tons of illex and 5 tons of loligo.

Appendix 14A. Poland. Squid fishing licenses received from the Falklands Government, by species, number of vessels, total catch and catch per vessel; 1987-1993.

	Species								
	Loligo			Illex			Total		
	Vessels	Catch		Vessels	Catch		Vessels	Catch	
		Total	Vessel*		Total	Vessel*		Total	Vessel*
	Number	Metric tons		Number	Metric tons		Number	Metric tons	
1987	12	24,280	2,223	14	19,618	1,401	26	43,898	1,688
1988	9	7,569	841	24	32,852	1,369	33	40,421	1,225
1989	3	10,134	3,378	24	19,753	823	27	29,887	1,107
1990	3	6,579	2,193	14	3,382	241	17	9,961	586
1991	3	11,234	3,745	17	7,234	426	20	18,468	923
1992	3	9,275	3,092	10	7,250	725	13	16,525	1,271
1993	3	NA	NA	1	NA	NA	4	NA	NA

Source: Falklands Fisheries Department, 1993.

* The average catch per vessel

APPENDIX 15

AN AGREEMENT BETWEEN THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLIC AND THE GOVERNMENT OF THE POLISH PEOPLE'S REPUBLIC ON COOPERATION IN THE AREA OF THE FISHING INDUSTRY

The Government of the Union of Soviet Socialist Republics and the Government of the Polish People's Republic,

Guided by the principles of the long-term program for development of economic, scientific, and technological cooperation between the Government of the Union of Soviet Socialist Republics and the Government of the Polish People's Republic for the period until the year 2000, signed in Moscow on May 4, 1984,

Noting the positive results of prolonged cooperation between both counties in various areas of the fishing industry,

Imparting important significance to the systematic increase of mutually beneficial economic, scientific, and technological cooperation on the stable agreed basis and to further enhancement and development of socialist economic integration in the area of fishing industry between both countries,

Taking into account the provision on the 1982 UN Convention on the Law of the Sea, signed, in particular, by the USSR and the PPR,

Having agreed as follows:

Article 1

The Contracting Parties shall implement economic, scientific, and technological cooperation in the area of the fishing industry along the following main directions:

Exchange of information and consultation on issues of world fisheries and foreign economic activities of the Contracting Parties in the area of the fishing industry;

Conduct of reciprocal fishing in maritime areas under the jurisdiction of each of the two countries in the field of fisheries in which their vessels have normally conducted such fishing in accordance with existing laws;

Rendering reciprocal services in joint fishing areas by provisioning vessels with fuel, water, food, fishing equipment, fishing tackle, and in the transportation of fish products;

Exchange of fish and fish products;

Commercial fisheries in brackish and sea water;

Mutual assistance in organizing and carry out repairs of vessels in fishing areas;

Development and introduction of more effective methods of commercial fishing fleet operations, technology, and equipment repair;

Joint scientific research directed at discovering, conserving, and rationally utilizing living sea resources in maritime areas under the jurisdiction of each of the countries in the field of fishing and on the high seas;

Forecasting the development of the fishing industry, including the commercial fishing fleet;

Research directed at improving and modernizing commercial fishing fleet vessels;

Development and establishment of vessels technology, commercial equipment, and instruments and also equipment for coastal enterprises;

Improvement of existing and development of new fishing gear and methods of catching fish;

Automation of fish catching processes;

The technology of production of high quality output from living sea resources;

Mechanization and automation of fish product production processes; and

Along other direction in areas of the fishing industry which represent mutual interests.

Article 2

For the purposes of implementing the cooperation mentioned in Article 1 of this Agreement, the Contracting Parties shall:

Develop five-year and annual economic, scientific, and technological cooperation plans for expert exchanges and organize fulfillment of these plans;

Promote the establishment and increase of direct ties between appropriate bodies, organizations, and enterprises of both countries;

In accordance with existing laws, permit each other's fishing vessels to conduct fishing in maritime areas under the jurisdiction of the appropriate Contracting Party in the field of fisheries and determine conditions for conducting such fishing;

Establish joint enterprises, scientific and production cost accounting associations, and interim scientific-research collectives when necessary;

Examine issues to organize joint foreign economic activity in the fishing industry area;

Convene scientific and technical conferences and meetings on various fishing industry issues when necessary;

Determine the nature and scope of exchanges of specimens, statistical data, and other information which it may be necessary to provide during the course of implementing this Agreement; and

Examine other issues of the fishing industry which represent mutual interests.

Article 3

While carrying out economic, scientific, and technical cooperation, competent bodies and organizations of the Contracting Parties shall be guided by existing Agreements between the two countries on organizational, economic, and legal bases of cooperation, and also by active normative documents in relation of both countries developed within the framework of the CMEA (Council for Mutual Economic Aid).

Realization of specific themes of economic, scientific, and technical cooperation shall be carried out on the basis of treaties and contracts concluded between competent bodies and organizations of the Contracting Parties.

Article 4

A Joint Fishing Commission, henceforth called the Commission, is being established to attain the goals of this Agreement.

Each Contracting Party shall appoint its representative, his deputy, and a responsible secretary to the Commission and shall notify the other Contracting Party of their names during the course of the two months after this Agreement comes into force.

Commission sessions shall be conducted when necessary but no less than once per year, alternately on the territory of the nation of each Contracting Party. Expenditures associated with conducting the session shall be borne by the Contracting Party on whose territory the session is being conducted.

Expenditures associated with travel by session participants shall be borne by the Contracting Parties who directs their travel.

The Commission developed and adopts its rules of procedure and can introduce amendments to them when necessary.

When necessary, the Commission forms auxiliary bodies on a permanent or interim basis and determines their tasks, power, and operating procedures.

Article 5

The Commission examines all issues which arise while implementing this Agreement and presents appropriate recommendations to the Contracting Parties.

Recommendations are adopted with the approval of representatives of the Contracting Parties and enter into force if neither of the Contracting Parties expresses nonconcurrence with them within two months.

Decisions of the Commission on issues of a procedural nature enter into force from the moment of their adoption.

Article 6

The Contracting Parties, taking into account the demands which result from this Agreement, may appoint their representatives on issues of cooperation in the area of the fishing industry within their diplomatic institution or consulates which are located in the USSR and PPR, respectively.

Article 7

This Agreement does not affect the rights and obligations of the Contracting Parties which result form bilateral or multilateral agreements in which they participate.

Article 8

The Contracting Parties agree that, at the moment this Agreement enters into force, the following shall cease to be in force.

The Agreement between the Government of the Union of Soviet Union Socialist Republics and the Government of the Polish People's Republic on Mutual Relations in the Field of Fisheries in the Baltic Sea of May 11, 1978; and

Article 9

This Agreement is subject to ratification in accordance with procedures established by the domestic laws of each of the Contracting Parties.

This Agreement shall enter into force on the day that diplomatic documents are exchanged notifying of its ratification and shall remain in force until such time as either Contracting Party submits written notification of this desire to terminate it. In this case, the Agreement shall cease to be in force 12 months after receipt of such notification by the other Contracting Party.

Termination of this Agreement shall not affect obligations of the Parties which result from treaties and contracts concluded during its execution by competent bodies, organizations, or enterprises of the Contracting Parties.

This Agreement can be amended or supplemented with the concurrence of both Contracting Parties.

DONE in Moscow, December 15, 1987, in duplicate, each in the Russian and Polish languages, both texts being equally authentic.

For the Government of the Union of Soviet Socialist Republics

For the Government of the Polish People's Republic

Appendix 16. Poland. Fishery allocations in the United States Exclusive Economic Zone, by selected species; 1977-90.

Year	Pollock			Herring	Pacific cod	Mackerel		Hake			Other	Total
	Gulf	Bering	Total			Atka	Atlantic	Red	Silver	Pacific		
						Metric Tons						
1977	6,000	-	6,000	5,100	100	1,000	20,200	-	-	18,000	16,801	67,201
1978	15,840	-	15,840	-	798	1,030	†	†	-	28,930	7,103	53,701
1979	19,523	25,000	44,523	125	1,224	1,754	35	127	1,000	23,323	15,945	88,056
1980	27,465	46,455	73,920	*	3,240	1,403	4,558	200	300	120,000	36,394	239,815
1981	46,677	54,624	101,301	-	4,670	6,483	305	487	2,834	80,000	37,084	230,330
1982	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-
1984	3,350	54,568	57,918	-	545	42	-	-	-	20,000	581	79,086
1985	-	32,799	32,799**	-	406	-	-	-	-	54,000	2,090	89,295
1986	-	7,226	7,226	-	86	-	-	-	-	70,000	731	78,043
1987	-	-	-	-	-	-	-	-	-	53,800	-	53,800
1988	-	-	-	-	-	-	16,700	5	10	36,500	328	53,543
1989	-	-	-	-	-	-	8,896	5	15	-	143	9,059
1990	-	-	-	-	-	-	2,334	5	-	-	92	2,431

Source U S Department of Commerce NOAA NMFS *Fisheries of the United States*, various years, Washington, DC.

† The Poles did not accept the allocations offered by the United States
* Herring was declared a prohibited species on February 8, 1980.
** A portion of the allocated resources was in joint ventures with U.S. companies In 1986, only J/V were given a small allocation of 7,226 tons

4.4

ROMANIA

Romania is adjacent to the Black Sea and its fisheries have been traditionally based on that body of water. In the 1960s, however, it began to buy high-seas fishing and fishery support vessels from the Soviet Union, Poland and the former East Germany. Along with the increase in fishery-vessel tonnage, its marine catch grew rapidly until the late 1970s when coastal countries began to extend their fishery jurisdictions to 200 nautical miles. The Romanian fishing industry could not adapt to the new conditions and Romania's catch began to stagnate and finally decrease rapidly. The fishing fleet aged and became more of a burden than an asset. The outlook for Romania's government-owned fishing industry is bleak and the lack of rapid privatization has helped to perpetuate its inbred inefficiencies. The fishing industry continues to try to meet its two principal goals: 1) to fully utilize its fishery fleet and thus maintain full employment of its fishermen, and 2) to earn hard currencies through the export of fishery products.

CONTENTS

I. Background 255
II. Fishing Fleet 256
A. High-seas Fleet 256
B. Black Sea Fleet 257
III. Shipyards 258
IV. High-seas Fishing Grounds and Catch 260
V. High-seas Fishery Organization 262
VI. Bilateral Fishery Agreements 262
VII. Fisheries Research 263
VIII. Outlook 263
Sources 264
Endnotes 265
Appendices 267

I. BACKGROUND

The Republic of Romania, a country with a population of 23 million, has a coastline of 245 kilometers on the Black Sea. Its high-seas fishing industry is mainly located in the port of Tulcea from where the fleet has to cross both the Bosphorus and Gibraltar Straits to arrive at the Atlantic fishing grounds.

Romania had a traditional Black Sea fishery which was continued after World War II. In December 1947, King Michael abdicated under communist pressure and a People's Republic of Romania was

Table 1. Romania. Fishing fleet, by selected vessel capacity: 1993.

Capacity	Number	GRT	Average GRT
100-200 GRT	7	863	123
Above 500 GRT	50	220,669	4,413
TOTAL	57	221,532	3,886

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993

proclaimed. This meant the nationalization of the industry, including the small Black Sea fisheries.

After the December 1989 revolution toppled the Ceausescu dictatorship, the Romanian fishing industry became independent of government control and had to restructure itself to survive. Since Ceausescu's fall, the Romanian Government has not extended any financial assistance to its fishing industry.[1]

II. FISHING FLEET

The Romanian fishing fleet register consisted of 57 units in July 1993. Of this total, 7 vessels were small (average tonnage was 123 gross registered tons (GRT)) and were thus probably deployed in the Black Sea fisheries (table 1). The other 50 vessels were large fishing trawlers and refrigerated fishery transports and baseships with a total gross tonnage of over 220,000 tons; they are capable of operating on distant-water fishing grounds.

A. High-seas Fishing Fleet

Romania began to build up its high-seas fleet rapidly during the 1960s and 1970s (appendix 1 and figure 1). Its first vessels were 2 stern trawlers of the CONSTANTA class -- named *Constanta* and *Galati* -- purchased from Japan in 1964; one of these original trawlers (*Constanta*) is still part of the fleet today. The growth of the high-seas fleet was stimulated from 1971-1975 by a major government program to expand Romanian food production industries which earmarked 20 percent of all investment funds, or about US$30 million annually, for fisheries development.[2] By 1973, the fleet had increased considerably to 20 stern trawlers, supported by 4 refrigerated transports, all of which were purchased in Eastern Europe.[3]

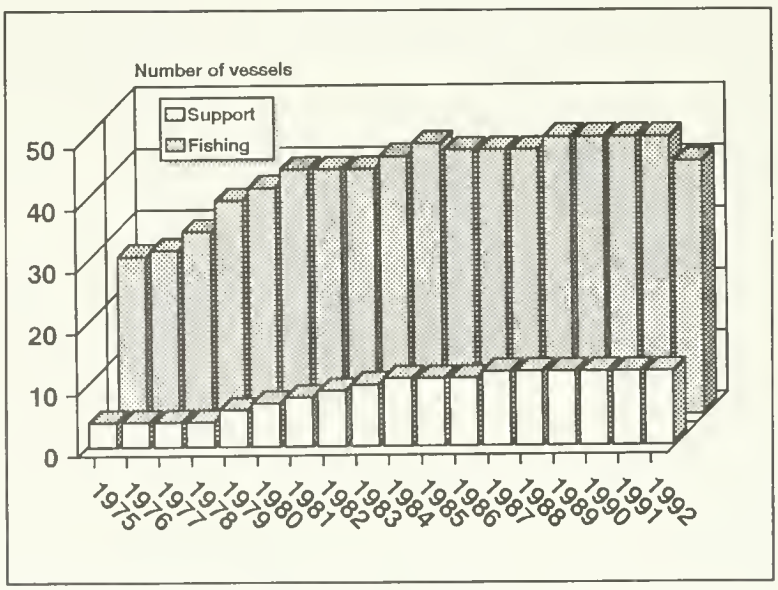


Figure 1. Romania. High-seas fishing fleet, 1975-92.

The Romanian high-seas trawler fleet continued increasing until the mid-1980s when it consisted of over 40 large stern factory trawlers (appendix 2). This number did not increase much during the next decade; in

1992, there were 41 such vessels, but by 1993, their number had decreased to 38 units.[4]

The fisheries support fleet, however, continued increasing in the early 1980s and almost doubled by 1986, when the Romanian fisheries catch peaked. It has remained at 12 large units during the past 7 years, according to Lloyd's Register, even though the fishery landings have decreased by about 55 percent.[5] This means that the productivity of the fisheries support fleet must have decreased by approximately 50 percent since 1986.

In July 1993, the Romanian high-seas fishing fleet register consisted of 50 fishery vessels with a total gross tonnage of 221,000 tons. Of this total, 38 units are fishing trawlers (appendix 4), while 12 units are refrigerated transports (appendix 5) supporting the fishing operations. The trawlers have a capacity of between 2,000 and 4,000 GRT each; the 12 fishery support vessels of between 5,000 and 12,000 gross tons. Most of these vessels are over 10-20 years old and were built in the former East Germany, Poland, the former USSR, and Romania.[6] Despite the advanced age of most of its fishery vessels, it appears that Romania has done little retiring or modernizing of its vessels during the past few years.[7]

While the Romanian high-seas fleet maintains 50 fishery vessels on the register, in reality only 30 vessels are engaged in distant-water operations. According to a May 1993 article by an official of the Romanian Development Agency, Anca Sfectcovici, at the present time, the Romanian high-seas fishing company deploys only 20 trawlers, 10 fishery transports, and 2 tankers in high-seas fisheries (table 2).[8]

Table 2. Romania. High-seas fishery fleet actually deployed in fishing operations, May 1993.

Vessel type	Number	GRT	Average GRT
Fishing trawlers	20	67,700	3,385
Fishery transports	10	84,000	8,400
Tankers	2	2,000(Est.)	1,000
Total	32	153,700	4,803

Source: Sfectcovici, A "The Fishery Industry of Romania." *op. cit.*, 1993

The 20 trawlers in operation are all of the PROMETEI class (also known as the super-ATLANTIK class-photo 1), the most modern and least aged stern factory trawlers Romania possesses. The remaining 18 trawlers are not used for fishing, according to Ms. Sfectcovici's article, but they have not been de-registered, scrapped, or sold, as far as is known. Where these vessels are physically located is not known either. A French magazine reported in 1990, that these trawlers were "cannibalized" for parts, especially the sonar equipment, to maintain the super-ATLANTIKs in good operational condition.

PROMETEIs are over 100 meters long, have engines with 3,800 horse power, and a can carry a crew of 85 persons.

B. Black Sea Fleet

In July 1993, Romania owned 6 fishing cutters and 1 small research vessel (*Delfin*) which were deployed in the Black Sea (appendix 6). In addition, Romania owns another 16 smaller (less than 100 GRT) fishing boats which were also deployed in the Black Sea. During the April to October 1993

Photo 1. Romania has 20 modern stern factory trawlers of the PROMOTEI class (3,900GRT). They were built in East Germany and Romania around 1980.

season, however, only 13 vessels out of the total 23 units were active in Black Sea fisheries.[9]

Romania's Black Sea coastal fishery does not contribute substantially to the country's overall fisheries catch (appendix 7, FAO statistical area 37). Even in 1986, Romania's best year for "coastal" catch, the Black Sea fishery contributed less than 6 percent of the total annual catch, while the inland (lakes, rivers, ponds, aquaculture, etc.) fisheries catch represented over 24 percent. The Black Sea has been becoming increasingly polluted and less favorable to commercial fishing. Unless serious measures are implemented to remedy the situation, this fishery will yield less and less to Romanian fishermen.

III. SHIPYARDS

Romania has eight shipyards -- six on the Danube and the two largest ones on the Black Sea. They build a wide range of vessels for both foreign and domestic markets.

Most Romanian fishing and fishery support vessels were built in the shipyards of other communist countries (see appendix 1 for

Photo 2. A giant refrigerated transport (11,755GRT) serviced Romanian fishermen operating in distant waters. Romania bought 4 of these vessels in East Germany during the 1970s.

details) until 1980. At that time, the Romanian Government decided to begin building both types of vessels in domestic shipyards, thus becoming independent of other CMEA countries with which political relations became strained after Ceausescu's Romania several times chose an independent course in its foreign relations. The last 5 PROMETEI-class fishing trawlers were built in the Braila Shipyard on the Danube from 1980-1984 (appendix 1). The last 6 POLAR-class refrigerated transports and baseships were also built in Romania at the Galati Shipyard, which is also located on the Danube River (photo 2). The homeport of the Romanian high-seas fleet is in another Danube port - Tulcea. This was probably the reason why the Tulcea Shipyard was selected as the repair and maintenance shipyard for the Romanian high-seas fleet and remains so to this day.[10]

The Black Sea coastal trawlers are currently built in the Tulcea Shipyard; the 19th such vessel was nearing completion in March of 1989.[11] More recent information is lacking.[12]

IV. HIGH-SEAS GROUNDS AND CATCH

High-seas fishing by Romanian vessels began off West Africa in 1964 (as soon as Romania purchased 2 stern factory trawlers from Japan), on Georges Bank off New England in 1965, and in the rest of the **Northwest Atlantic** and off Labrador in 1969. The total catch increased from 8,000 tons in 1964 to over 76,000 t in 1973.[13] Following the implementation of 200-mile exclusive fishery zones in the late 1970s, however, the small fishery off the North American coast (FAO statistical area 21) was reduced to negligible amounts by 1980, and completely eliminated following the Americanization and Canadianization of those fisheries.

In the **Northeast Atlantic** (FAO statistical area 27), the Romanians began a small fishery which yielded 3,700 t of fish in 1975. In 1977, however, when the EC countries extended their fisheries jurisdiction to 200 nautical miles, the Romanians, like the other Eastern European communist-bloc countries -- including the Soviet Union -- were expelled from EC waters and subsequently received no access permits.

During the past 15 years, the Romanian fishermen operated only off West Africa in FAO statistical areas 34 and 47 (appendix 7).

The fisheries in the waters of the FAO statistical area 34 are regulated by the **Central Eastern Atlantic** Fisheries Commission (CECAF). The Romanians fished mostly in the 200-mile zone of Mauritania with which they concluded a fisheries agreement in October 1973.[14] By June 1974, they agreed to establish a joint fishery venture in exchange for access to fishery resources in Mauritanian waters. Later that year, 9 large Romanian stern factory trawlers were deployed off Mauritania. These fishing grounds were the most important high-seas Romanian fishery for the past two decades. The annual catch was about 80,000 tons, but in 1987 and 1988, over 100,000 t of fish were harvested with a peak at 125,000 t in 1988 (appendix 7, figure 2). In recent years, the Romanian catch off Mauritania decreased considerably and amounted to only 57,000 t in 1992. Its significance to Romania, however, increased greatly. Following the discontinuation of foreign fishing off Namibia in 1990, the fishery off Mauritania remains the only Romanian high-seas harvesting area.

Frozen and whole, the catch from West African fishing grounds is transported by refrigerated cargo vessels back to Romania. These transports work on the fishing grounds for four years before they return home, although their crews may be exchanged by plane or ship every 6 months. The average catch per trawler was reportedly from 2,000 to 5,000 tons per year. Certain trawlers catch as much as 9,000 tons per year. The landings (horse mackerel, sardines, mackerel, and cod) were mostly sold on domestic markets. Following its independence on 21 March 1990, Namibia banned foreign fishing in its waters which left the Romanians with only one fishing ground: the one off Mauritania. How successful will this fishery be in the future? According to a French source, Romanian biologists noted a decrease of blackjack mackerel (trachurus), round sardinella (aurita), and mackerel on the high-seas off Mauritania in 1990.[15] Could the sharp catch decrease in 1992 be a sign of impending trouble?

In the Convention area of the International Commission for the **Southeast Atlantic** Fisheries (ICSEAF), the Romanians began fishing in 1970 with 3 stern factory trawlers and continued this fishery with 4 trawlers in 1971.[16] The catch per unit of effort was so low (1.4 tons per hour of towing) that they discontinued this fishery for four years (1972-1975) and switched their operations elsewhere where the harvesting success was better. It was only in 1976 that the Romanian fishermen returned to southeastern Atlantic fisheries (FAO statistical area 47). The move was the result of the United States' -- off whose coasts, on Georges Bank, they developed an active fishery -- extension of its fisheries jurisdiction to 200 miles.

About 15-20 stern factory trawlers were deployed in the ICSEAF area in the early 1980s. Most fished off Namibia (which was then known as Southwest Africa), but some also operated off Angola. Poor catch results in 1976 and 1977 (1.6 t per hour of towing) soon improved as the Romanian fishermen became more experienced; by the mid-1980s the hourly catch exceeded 4 metric tons.

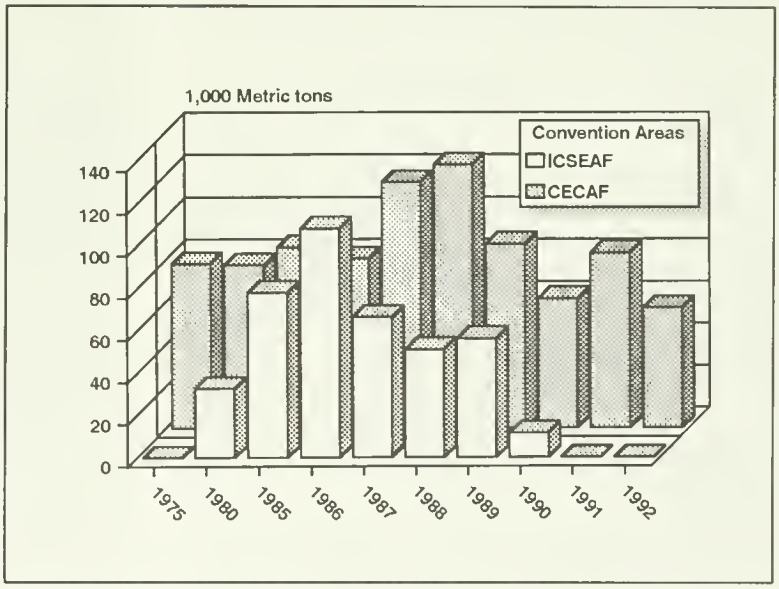


Figure 2. Romania. Fishery catch in the ICSEAF and CECAF convention areas, by quantity: 1975-92.

The grounds off Namibia and the Republic of South Africa used to be Romania's second largest fishery. This fishery peaked in 1986 with a catch of 109,000 t; by 1989 it was only a half of that amount. The overfishing of South African pilchard off South Africa caused the ICSEAF to reduce the catch quotas there. The Romanian fishery was heavily affected, reduced to only 12,600 tons in 1990, and completely terminated in 1991 (figure 2).[17]

In 1991, Romanian fishermen landed 83,200 t of fish and shellfish from their distant-water operations in the North Atlantic off West Africa (Mauritania). This represented an increase of 10,000 t over the 1990 catch, despite the fact that the fishery off Southwest Africa (Namibia) had ceased that year. In 1992, however, the catch decreased by almost a third to 57,100 t, which represented only 30 percent of the 1986 catch, Romania's best year (appendix 7). In 1991 and 1992, the fisheries off the West African coast were the last Romanian distant-water fishery left.

Despite these vicissitudes, high-seas fisheries contributed more than two-thirds of the total Romanian fisheries catch during the past three decades. This large percentage remained constant because the Romanian inland fisheries remained stagnant through

1990 when they began a steady decrease, while the Black Sea fisheries have been collapsing steadily, dropping to only 3,700 t by 1992 (appendix 7).

The Romanian high-seas fisheries urgently need to diversify and find additional fishing grounds. In the past, the country's biologists conducted some exploratory fishing in the Mozambique Channel off eastern Africa and near the Island of South Georgia, but without satisfactory results.[18] The recent decision by the Namibian Government to open its 200-mile zone to foreign fishing on January 1, 1994, has potential for Romanian fishermen.

V. FISHERY ORGANIZATION

Romanian state-owned fishery companies were under the jurisdiction of the Ministry of Transportation and Telecommunications until 1977 when they were placed under the Ministry of Food and Agriculture.

The Marine Fisheries Company of Romania (IPO - Intreprinderea de Pescuit Oceanic) is located in Tulcea, on the Danube Delta, 60 kilometers from the Black Sea. IPO is the only high-seas fishing enterprise in Romania and owns the entire high-seas fleet. The December Revolution brought managerial independence to IPO. In 1990, its personnel attempted to reorganize their enterprise to improve working conditions, make it profitable, and adjust to autonomy from government control.

Its vessels are largely aged and obsolete and the least efficient need to be decommissioned. IPO decided to concentrate its resources on the utilization of its 20 supertrawlers (PROMETEI class), 15 of which were built in the former East Germany with the newest 5 built in Romania itself and are 100 meters long. Its other 20 trawlers will be "cannibalized" for parts. To create better conditions for its workers, the IPO management will focus on the quality rather than the quantity of its products in an effort to retain the dwindling consumer market for fishery products.[19]

VI. BILATERAL AGREEMENTS

In January 1958, Romania signed an agreement on cooperation in the Danube fisheries with Bulgaria and Yugoslavia. The Soviet Union, then the paramount political influence in Eastern Europe, joined as a signatory. A year later, in 1959, the USSR, Bulgaria, and Romania concluded an agreement on the Black Sea fisheries and established a Commission regulating them.

In July 1962, the Soviet Union, Poland, and the German Democratic Republic (GDR) signed in Warsaw an agreement on mutual cooperation in the development of high-seas fisheries. Romania and Bulgaria were co-opted into the agreement and participated in all annual plenary sessions, as well as in technical committees and working groups. Unlike Bulgaria, however, the Romanians bought their first high-seas trawlers in 1963 from Japan rather than from the Soviet Union. Whether the reason for this purchase was technical/commercial, or political, is not known. A glance at appendix 1, however, clearly shows that, except for 2 fishery transports in 1972, Romanian officials preferred to buy their fishing and fishery support vessels from Poland and the GDR. Later, in the 1980s, they began to build both types of vessels themselves.

In February 1978, Romania and the Soviet Union signed in Bucharest a bilateral fisheries cooperation agreement (appendix 8). The 5-year agreement[20] established a Joint Commission to meet at least once each year alternately in Bucharest and Moscow. The Commission would coordinate the exchange of fishery experts and the exchange of results of exploratory and other fishery research, organize technical conferences, etc. One of its most important provisions (3rd) was the coordination of Romanian and Soviet high-seas fisheries in various world oceans.[21] Whether Romania continued this agreement with the successor state of the USSR - Russia - is not known.

The Romanian Government attempted to conclude bilateral agreements with various countries, including the United States,[22] Iceland, and the Republic of South Africa, to regain access to fishing grounds. Canada responded positively, extending Romanian fishermen a 1990 catch allocation of 10,000 t of cod which was fished by 5 IPO supertrawlers.[23]

VII. FISHERIES RESEARCH

The high-seas fisheries research is the responsibility of the Romanian Institute of Marine Research (RIMR), located in Constanta on the Black Sea. The RIMR was established in 1970 from 4 smaller organizations (2 biological stations and 2 laboratories). Administratively, the RIMR is under the National Council for Science and Technology which coordinates various research fields.

The Institute has no specialized vessels for high-seas investigations and conducts fisheries research aboard commercial vessels during their regular deployment.

VIII. OUTLOOK

Romania's two principal goals for its high-seas fishing industry are the export of processed fishery products, and the full use of its fishing and fishery support vessels.[24] Both will depend on the ability of Romanian fishery officials to negotiate access agreements for the high-seas trawlers and to provide efficient and speedy transportation of landed catch to domestic and foreign markets. As was the case in the past, the task of providing fishery protein to the population will fall mainly to the distant-water fleet. The inland fisheries will probably continue decreasing until environmental legislation prevents the pollution of local lakes and rivers. The Black Sea fishery has been decimated during the past 4 years and will probably remain at low levels until the problem of the jellyfish infestation of the Black Sea waters is over. Despite the fact that fish culture production has been halved in recent years, this sector of the fishing industry remains potentially promising because of its proximity to the consumers and relatively low investment needs.

The number of the high-seas fishing trawlers has already been reduced by 50 percent and in view of the fact that Romania produces its own diesel fuel, their operation may prove to be profitable. They will most likely continue to operate off the West African coast, especially off Mauritania. In addition, a few trawlers may obtain permission from the Namibian Government to reenter the fishery inside the 200-mile zone of that country in 1994.

SOURCES

FAO. *Yearbook of Fishery Statistics: Catches and Landings*. Rome, various years.

Jezequel, Bruno. "Romanian Fisheries after the Revolution: the Slogan is Quality." *Le Marin* (Rennes, France), 1 June 1990.

Lloyd's Register of Shipping, *Lloyd's Register of Shipping Statistical Tables*, London, various years.

Sfectcovici, Anca. "The Fishery Industry of Romania." Published in: *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia*. London: Agra Europe, Ltd., 1993.

U.S. Department of State, cable No. 154373, 11 June 1993.

U.S. Navy, Office of Naval Intelligence, 27 July 1993.

ENDNOTES

1. Jezequel, Bruno, "Romanian Fisheries after the Revolution: the Slogan is Quality," *Le Marin* (Rennes, France), 1 June 1990; and U.S. Department of State, 11 June 1993 (cable No. 154373).

2. *Journal of Commerce*, (New York), 2 November 1970. The food production investment funds in the 5-Year Plan for 1971-75 amounted to US$ 750 million, or $150 million each year; 20 percent of this amount would be $30 million. Most of these funds were used to buy new fishery vessels in the former German Democratic Republic and in Poland. The Romanians were planning to deploy the new modern processing vessels in the Atlantic cod fishery off New England and sell the catch to U.S. fish-processing plants. Unfortunately, these plans went awry when the United States Government extended its fisheries jurisdiction from 12 miles to 200 nautical miles in late 1976.

3. Romanian fisheries delegation, Personal Communication, 5 December 1973. The actual number of Romanian stern factory trawlers was 18 at the end of 1973, but the Romanians probably included the 1 trawler which was on order in Poland and delivered in 1974.

4. Lloyd's Register of Shipping, *Lloyd's Register of Shipping Statistical Tables*, London, various years; U.S. Navy, Office of Naval Intelligence (ONI), 27 July 1993. The two sources have slightly different figures because ONI only shows the Romanian high-seas fleet as it existed on 27 July 1993 and does not include any trawlers which might have been decommissioned prior to that date. Lloyd's statistics, on the other hand, go only through June of 1992 when they show the number of high-seas fishing vessels at 41 units; a year later the ONI count gives 38 such vessels, the "missing" 3 trawlers were probably decommissioned.

No such discrepancies exist in the number of the 12 fishery support vessels, none of which has yet been decommissioned. Both Lloyd's (appendix 2) and ONI (appendices 1 & 4) have the same numbers.

5. Anca Sfectcovici of the Romanian Development Agency stated in May 1993 that only 10 fishery transports, having 84,000 GRT, support the high-seas fleet. Given the difference between this tonnage and the tonnage reported by Lloyd's in appendix 3 (about 95,000 GRT), it would appear that the 2 eliminated fishery transports were the 2 SIBIR-class vessels (*Polar I* and *Polar II*). Their total gross tonnage is 10,240 GRT.

6. U.S. Navy, Office of Naval Intelligence, 27 July 1993.

7. The Office of Naval Intelligence, in late July 1993, reported no knowledge of any Romanian vessels being reflagged or having been eliminated from the Romanian registry during the last 2 years.

8. Anca Sfectcovici, "The Fishery Industry of Romania." Published in: *The First East-West Fisheries Conference, 20-22 May 1993, St. Petersburg, Russia*, (London, Agra Europe, Ltd.), 1993.

9. Ibid.

10. U.S. Department of State, 11 June 1993.

11. Agerpres in English, 21 March 1989.

12. In 1989, the Tulcea Shipyard was modernized and reorganized so that it can now build vessels as large as 15,000 deadweight tons. It is not known whether it still builds the small Black Sea trawlers.

13. Romanian fisheries delegation, Personal Communication, 5 December 1973.

14. William B. Folsom and Dennis M. Weidner. *Mauritania's International Fishery Relations*, published as Foreign Fisheries Leaflet No. 76-4 by the Office of International Fisheries, NMFS, NOAA, U.S. Department of Commerce, Washington, April 1997.

15. Jezequel, *op. cit.*

16. International Commission for the SE Atlantic Fisheries. *Collection of Scientific Papers. Part II.* Madrid, various years.

17. FAO. *Yearbook of Fishery Statistics: Catches and Landings*. Rome, various years.

18. Jezequel, *op. cit.*

19. Ibid.

20. The agreement entered into force on 3 February 1978. It remains in force automatically for successive 5-year periods unless one of the contracting parties advises the other, in writing, 6 months prior to the expiration of the agreement that it wants to withdraw.

21. *Sbornik Dvukhstoronnikh Soglashenyi SSSR po Voprosam Rybnogo Khoziayaistva, Rybolovstva i Rybokhoziaystvennikh Issledovanyi.* VNIRO, Moscow, 1987.

22. Romania had a GIFA with the United States since November 1976, but it expired in December 1988.

23. Jezequel, *op. cit.*

24. U.S. Department of State, 11 June 1993.

Appendix 1. Romania. Delivery of fishery vessels, by number, class, gross tonnage, and country of construction; 1963-1987.

Year	Number	Class	GRT	Built in
Fishing vessels				
1963	2	KONSTANTA	3,600	Japan
1968	2	CARINA	2,700	Poland
1969	1	CARINA	2,700	Poland
1970	2	CARINA	2,700	Poland
	1	ATLANTIK	2,600	GDR
1971	4	ATLANTIK	2,600	GDR
1972	3	ATLANTIK	2,600	GDR
1973	3	VEGA	2,600	Poland
1974	1	VEGA	2,600	Poland
1976	5	PROMETEI	3,900	GDR
1977	4	PROMETEI	3,900	GDR
1978	3	PROMETEI	3,900	GDR
1979	3	PROMETEI	3,900	GDR
1980	1	PROMETEI	3,900	Romania
1983	2	PROMETEI	3,900	Romania
1984	1	PROMETEI	3,900	Romania
1987	1	PROMETEI	3,900	Romania
	Total=39			
Support vessels				
1972	2	SIBIR	5,100	USSR
	1	LIEBKNEKHT	11,800	GDR
1973	1	LIEBKNEKHT	11,800	GDR
1978	1	LIEBKNEKHT	11,800	GDR
1979	1	LIEBKNEKHT	11,800	GDR
1980	1	POLAR	6,100	Romania
1981	3	POLAR	6,100	Romania
1983	2	POLAR	6,100	Romania
	Total=12			

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993.

GRT - Gross registered tonnage (given in approximate round figures)

Note: This chronological list of additions to the Romanian high-seas fleet does not include vessels which might have been sold, scrapped or reflagged. It is known that one of the 2 KONSTANTA class trawlers (the Galati) is no longer operational, but its disposition is not known.

Appendix 2. Romania. Number of high-seas fishing and fishery support vessels, 1975-92.

Year	Fishing	Support	Total
	Number of vessels		
1975	26	4	30
1976	27	4	31
1977	30	4	34
1978	35	4	39
1979	37	6	43
1980	40	7	47
1981	40	8	48
1982	40	9	49
1983	42	10	52
1984	44	11	55
1985	43	11	54
1986	43	11	54
1987	43	12	55
1988	45	12	57
1989	45	12	57
1990	45	12	57
1991	45	12	57
1992	41	12	53

Source: *Lloyd's Register of Shipping Statistical Tables*, London, various years.

Appendix 3. Romania. Gross registered tonnage of high-seas fishing and fishery support vessels, 1975-92.

Year	Fishing	Support	Total
	1,000 Gross Tons		
1975	69.2	34.0	103.2
1976	73.2	34.0	107.2
1977	84.4	34.0	118.4
1978	104.2	34.0	138.2
1979	111.3	58.5	169.8
1980	120.8	61.5	182.3
1981	120.0	69.8	189.8
1982	120.0	75.9	195.9
1983	126.7	82.1	208.8
1984	134.6	88.2	222.8
1985	130.7	88.2	218.9
1986	130.7	88.2	218.9
1987	130.7	94.4	225.1
1988	138.6	94.4	233.0
1989	138.6	94.4	233.0
1990	138.1	94.4	232.5
1991	138.1	94.4	232.5
1992	123.4	94.4	217.8

Source: *Lloyd's Register of Shipping Statistical Tables*, various years.

Appendix 4. Romania. High-seas fishing trawlers, by class, name, gross tonnage, and country and year of construction; 1993.

Class/Vessel name	Gross tonnage	Country built	Year built
ATLANTIK- 8 vessels			
Ialomita	2,657	GDR	1971
Jiul	2,657	GDR	1972
Milcov	2,657	GDR	1972
Mures	2,173	GDR	1970
Neajlov	2,156	GDR	1972
Siret	2,657	GDR	1971
Somes	2,657	GDR	1971
Trotes	2,657	GDR	1971
CARINA- 5 vessels			
Caraiman	2,681	Poland	1970
Cris	2,681	Poland	1970
Marea Niagra	2,715	Poland	1968
Negoiu	2,682	Poland	1969
Razelm	2,681	Poland	1968
CONSTANTA- 1 vessel			
Constanta	3,631	Japan	1963
PROMETEI- 20 vessels			
Amaradia	3,971	Romania	1984
Bahlui	3,931	GDR	1978
Bistrita	3,933	GDR	1976
Caliman	3,977	GDR	1977
Cerna	3,977	GDR	1976
Cindrelu	3,977	GDR	1977
Ciucas	3,977	GDR	1977
Costila	3,977	GDR	1977
Crisul Alb	3,977	GDR	1979
Dimbovita	3,933	GDR	1979
Dorna	3,977	GDR	1976
Jijia	3,931	GDR	1978
Magura	3,971	Romania	1983
Oltet	3,977	GDR	1979
Ozana	3,977	GDR	1978
Paring	3,930	Romania	1980
Putna	3,933	GDR	1976
Rarau	3,466	Romania	1987
Rodna	3,930	Romania	1983
Tirnava	3,933	GDR	1976
VEGA- 4 vessels			
Clabucet	2,632	Poland	1973
Inau	2,680	Poland	1973
Mindra	2,629	Poland	1974
Semenic	2,631	Poland	1973

TOTAL = 38 vessels TOTAL GROSS TONNAGE = 126,569 GRT

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993.

Appendix 5. Romania. High-seas fishery support fleet, by class, name, gross tonnage, and country and year of construction; 1993.

Class/Vessel name	Gross tonnage	Country built	Year built
	metric tons		
SIBIR- 2 vessels			
Polar I	5,120	USSR	1972
Polar II	5,120	USSR	1972
KARL LIBKNEKHT- 4 vessels			
Polar III	11,755	GDR	1972
Polar IV	11,755	GDR	1973
Polar V	11,755	GDR	1978
Polar VI	11,755	GDR	1979
POLAR VII- 6 vessels			
Polar VII	6,140	Romania	1980
Polar VIII	6,140	Romania	1981
Polar IX	6,140	Romania	1981
Polar X	6,140	Romania	1981
Polar XI	6,140	Romania	1983
Polar XII	6,140	Romania	1983

TOTAL = 12 vessels TOTAL GROSS TONNAGE = 94,100

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993.

Appendix 6. Romania. Black Sea fishing fleet, by class, name, gross tonnage, and country and year of construction; 1993.

Class/Vessel name	Gross tonnage	Built in	Year
	metric tons		
WLA 300- 7 vessels			
Delfin	120	Poland	1981
Dorada I	132	Poland	1982
Dorada II	132	Poland	1982
Morunul	107	Poland	1981
Steaua de mare 3	132	Poland	1982
TC01	120	Poland	1981
TC02	120	Poland	1981

TOTAL = 7 vessels TOTAL GROSS TONNAGE = 863 GRT

Source: U.S. Navy, Office of Naval Intelligence, 27 July 1993.

Appendix 7. Romania. Inland, coastal, and distant-water fisheries by FAO statistical areas; 1975, 1980, and 1985-1991.

Area	Year									
	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric tons									
Inland(05)	46.7	52.7	58.5	65.8	66.9	77.3	66.8	48.2	40.5	34.5*
Coastal(37)	6.3	10.3	14.3	15.8	14.0	14.0	13.8	6.3	1.2	3.7
Distant Water										
21	1.8	0.1	-	-	-	-	-	-	-	-
27	3.7	-	-	-	-	-	-	-	-	-
34	78.1	77.5	86.0	80.6	116.7	125.0	87.5	61.6	83.2	57.1
47	-	33.0	78.5	108.9	66.8	51.4	56.6	11.6	-	-
51	-	-	0.5	-	-	-	-	-	-	-
Subtotal	83.6	110.6	165.0	189.5	183.5	176.4	144.1	73.2	83.2	57.1
Percentage**	61.2	63.7	69.4	69.9	69.4	65.9	64.1	57.3	57.3	66.6
Total	136.6	173.6	237.8	271.1	264.4	267.7	224.7	127.7	124.9	95.3

Source: FAO. Yearbook of Fishery Statistics: Catches and Landings. Rome, various years.

* Of this total, 25,000 tons was cultured freshwater fish, mostly common and grass carps. This total was only half of the cultured production in 1986. The reasons for this decrease are not known.
** High-seas (distant-water) fisheries catch as a percentage of the total catch.

Note: The totals may not add because of rounding.

APPENDIX 8

AGREEMENT BETWEEN THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLICS AND THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF ROMANIA ON COOPERATION IN THE AREA OF THE FISHING INDUSTRY.

The Government of the Union of Soviet Socialist Republics and the Government of the Socialist Republic of Romania,

--Proceeding from the friendly relations which exist between both countries,

--Wishing to develop cooperation in the area of rational utilization and reproduction of fish stocks and improvement of fishing equipment and fish processing technology,

Have agreed as follows:

Article 1

The Contracting Parties agree to implement cooperation in the area of the fishing industry and for these purposes shall carry out measures directed at increasing the production of fish and fish products through their competent organizations to supply the demand in each of their countries on the basis of reciprocity. Soviet and Romanian competent organizations shall render mutual assistance in joint fishing areas, in particular, by means of an exchange of various types of operational materials and spare parts according to terms of contracts.

Article 2

A Joint Commission is established for the purposes of developing and carrying out measures for implementing this Agreement.

Sessions of the Joint Commission shall be conducted when necessary but not less than once per year, alternately on the territory of each of the Contracting Parties with expenditures borne by the party on whose territory the session is conducted.

The Joint Commission shall operate on the basis of the Charter developed and adopted at its first session.

The Commission's first session shall occur not later than three months after this Agreement has entered into force.

The Commission adopts recommendations which enter into force after their approval by the Contracting Parties.

Article 3

The Joint Commission fulfills the following functions:

a) Develops and, after their approval, organizes implementation of plans of cooperation and mutual assistance in the area of the
fishing industry, including plans for mutual exchanges of experts;

b) Organizes mutual exchange of experience on issues of developing and reproducing raw material resources, increasing the productivity of fishing, intensification of fishing in domestic waters, processing technology, and increase of fish product production;

c) Develops proposals for convening scientific and technical conferences and meetings on various fishing industry problems which are of mutual interest;

d) Develops and organizes the conduct of measures directed at the development of Soviet and Romanian fisheries in various areas of the World Ocean;

e) Determines the nature and scope of statistical and other materials presented by each of the Contracting Parties to the Joint Commission for the purposes of implementing this Agreement; and

f) Examines other issues which represent mutual interests in the area of the fishing industry which the Commission may be charged with by the Contracting Parties.

Article 4

The reciprocal transfer of the results of scientific and technical research provided for by the plans of cooperation, scientific and technical documentation, and specimens or models and materials, and also reciprocal exchange of experts and scientific researchers shall be carried out in accordance with "The General Terms for Carrying Out Scientific and Technical Cooperation and Collaboration between the USSR and the SRR" adopted by the Soviet-Romanian Commission on Scientific and Technical Cooperation.

Article 5

The provisions of this Agreement do not affect the right and obligations of the Contracting Parties which result from Agreements in which they participate.

Article 6

This Agreement can be amended by the approval of both Contracting Parties.

Article 7

This Agreement is concluded for a period of five years and enters into force upon signature. It shall remain in force for each successive five year period unless either of the Contracting Parties provides written notification of denunciation to the other no later than six months prior to the expiration of the current five year period.

DONE at Bucharest. February 3, 1978, in duplicate, each in the Russian and Romanian languages, both texts being equally authentic.

By Authority of the Government of the Republic of Republic Romania

By Authority of the Government of the Union of Soviet Socialist Republics

4.5

FORMER YUGOSLAVIA

The Socialist Federative Republic of Yugoslavia (SFRJ) ceased to exist in June 1991 when Croatia and Slovenia declared their independence. The country's fisheries were based on the Adriatic Sea except for a brief, unsuccessful attempt in the 1970s to enter the Atlantic tuna fishery. Most of its 2,000 kilometer-long Adriatic coast is now in the Republic of Croatia. The former SFRJ has had no high-seas fishing vessels since 1982. The newly formed states are not expected to expand into high-seas fishing in the near future.

CONTENTS

I. Background 275
II. Fleet 276
III. Modernization programs 276
IV. Fleet reduction 276
V. Shipyards 276
VI. International agreements 277
VII. Outlook 277
Endnotes 278
Appendices 279

I. BACKGROUND

The former Yugoslavia supported a small fishing industry which harvests mostly sardines in the eastern part of the Adriatic Sea. The vast majority of Yugoslav vessels were concentrated in the inshore fishery in territorial waters, but some 120 state-owned commercial vessels ventured further into the Adriatic.[1] Earlier in the 1970s, the SFRJ and Poland signed an agreement to set up a joint Atlantic fishing fleet of 23 vessels.[2] As far as is known, the project was never implemented. In recent years, before the eruption of civil war in 1991, the Yugoslav fishing fleet caught approximately 40,000 to 50,000 metric tons of marine fish and shellfish annually (appendix 1), and employed about 13,000 workers. By the end of 1991, the Food and Agriculture Organization (FAO) of the United Nations (UN) estimated that the Yugoslavian catch declined to 20,000 tons. In 1992, that figure was likely even lower in view of the protracted fighting between the Croats and the Serbs in the coastal province of Dalmatia where most fishing takes place.

Following the dissolution of the SFRJ in June 1991, the country broke up into five independent republics; of these, only three have a marine coast: Croatia, Montenegro (which is part of the new "Yugoslavia"[3]) and Slovenia. The Croatian coast is by far the longest (1,778 kilometers, km) and Croatian

fisheries will dominate Adriatic fisheries in the future. The small Montenegrin coastline (199 km) and the even smaller Slovenian littoral (32 km) will support some limited fishing, but mostly for domestic consumption.

II. FLEET

Yugoslavia had one high-seas vessel (615 gross registered tons, GRT) registered in 1975 and decommissioned in 1976 (appendix 2). From 1977 through 1981, Yugoslavia had two high-seas vessels, both registered at 1,047 GRT. These two vessels, tuna purse seiners built in Yugoslavia, were crewed by Dalmatian fishermen. They entered the tuna fishery off West Africa and transshipped their catch to a U.S. company in California. The venture was not successful for a variety of reasons and the U.S. company bought one of the seiners in 1980, and the other in 1981. Yugoslavia has had no high-seas vessels since 1982 (appendix 2).

In December 1992, the Croatian fleet consisted of 17 fishing vessels with a total tonnage of 2,284 GRT. Slovenia had 8 vessels (1,016 GRT) and Montenegro owned 2 vessels (208 GRT). The small-tonnage Croatian fleet was, on the average, 21 years old and was supported by a small vessel (113 GRT) which was 37 years old. Slovenia's fishing fleet, which had no support vessels, was much more modern and younger (11 years on the average), while Montenegro's fleet was purchased only 5 years ago.

III. MODERNIZATION PROGRAMS

During the 1980s, the Yugoslav Federal Government expressed an interest in expanding and modernizing its fishing fleet. In 1986, it proposed the construction of 15 new vessels and the modernization of 61 others, the work for which was to be completed in Yugoslav shipyards.[4] In 1987, Belgrade raised its catch targets by 60 percent to around 80,000 tons annually,[5] and subsequently announced that it would add 26 new vessels to its coastal fishing fleet.[6] Judging by the FAO catch statistics, these plans did not materialize and, instead of increasing by 60 percent, the Yugoslav marine catch decreased by more than 15 percent by 1991.

IV. FLEET REDUCTION

SFRJ has had no decommissioning schemes since it sold its last high-seas tuna vessel in 1981. Small vessels fishing in the Adriatic, however, are occasionally replaced.

V. SHIPYARDS

Several yards specialize in building vessels between 10 and 70 meters long and in modernizing vessels up to 1,000 GRT.[7] Some of the shipyards were building small coastal fishing vessels both for domestic and foreign clients (Libya was one of them). Information on their recent activity is not available.

VI. INTERNATIONAL AGREEMENTS

Prior to its dissolution, the SFRJ had a bilateral fishing agreement with Italy governing fishing in the Adriatic. The agreement will probably be renegotiated by the Republic of Croatia. Slovenia has no bilateral fisheries agreement with Italy.

VII. OUTLOOK

The authors do not expect Croatia, Slovenia, or Montenegro to expand into distant-water fisheries in the foreseeable future. The war has interrupted fishing activities and any investments in the development of fisheries. However, because the natural resources of the Adriatic are generally modest (the FAO refers to them as "fully exploited"[8]), it is not impossible that Croatia will seek to expand its fishing grounds.

ENDNOTES

1. United Nations Food and Agriculture Organization, *Fishery Country Profile--Yugoslavia*, January 1990.

2. Tanjug Press Agency, Belgrade, March 10, 1975, reported in *BBC Summary of International Broadcasting--Eastern Europe*, March 27, 1975.

3. Yugoslavia, though retaining the old name, now consists of only 2 republics: Serbia and Montenegro.

4. "Yugoslavia to Modernize Fishing Fleet," *Eurofish Report*, June 19, 1986.

5. "Yugoslavia Plans 60 percent Rise in Seafood Production by 1990," *Eurofish Report*, December 4, 1986, p. SP/9.

6. Tanjung News Agency, Belgrade, October 21, 1987, reported in *BBC Review of International Broadcasting--Eastern Europe*, November 5, 1987.

7. "Yugoslavia to Modernize Fishing Fleet," *Eurofish Report*, June 19, 1986.

8. United Nations Food and Agriculture Organization, *Fishery Country Profile--Yugoslavia*, January 1990.

Appendix 1 Yugoslavia Inland and coastal fisheries catch by FAO statistical areas, 1975, 1980, and 1985-1991.

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (05)	24.3	23.4	25.7	26.1	25.2	26.4	25.1	24 1	12.0
Coastal (37)*	32.3	35.0	49.3	51 4	56 2	45.3	46.7	41.3	23 6
Total	56.6	58.4	5.0	77.5	81.3	71.8	71.7	65.4	35.6

Source: FAO, Yearbook of Fishery Statistics: Catches and Landings; Rome, various years.

* Adriatic Sea fisheries.

Note The totals may not add because of rounding

Appendix 2.--YUGOSLAVIA. Number and tonnage of high-seas fishing vessels, ranked by tonnage, 1975-92.

Year	Gross Registered Tons (GRT)						Total	
	500-999		1,000-1,999		Over 2,000			
	GRT	*No.*	*GRT*	*No.*	*GRT*	*No.*	*GRT*	*No.*
1975	615	1	-	-	-	-	615	1
1976	-	-	-	-	-	-	0	0
1977	-	-	2	2,094	-	-	2	2,094
1978	-	-	2	2,094	-	-	2	2,094
1979	-	-	2	2,094	-	-	2	2,094
1980	-	-	2	2,094	-	-	2	2,094
1981	-	-	1	1,047	-	-	1	1,047
1982	-	-	-	-	-	-	0	0
1983	-	-	-	-	-	-	0	0
1984	-	-	-	-	-	-	0	0
1985	-	-	-	-	-	-	0	0
1986	-	-	-	-	-	-	0	0
1987	-	-	-	-	-	-	0	0
1988	-	-	-	-	-	-	0	0
1989	-	-	-	-	-	-	0	0
1990	-	-	-	-	-	-	0	0
1991	-	-	-	-	-	-	0	0
1992	-	-	-	-	-	-	0	0

Source: *Lloyd's Register of Shipping Statistical Tables*, Lloyd's Register of Shipping, London, UK, various years.

PHOTOGRAPHS

Photo 1.–The Almaz, is one of over 238 Alpinist-class trawlers built in Russian shipyards from 1971 to 1991.

Photo 2.--The Magnit is a Skryplev-class fishing vessel that fishes for the Russian fishing fleet. The vessel pictured is flying the Soviet-flag.

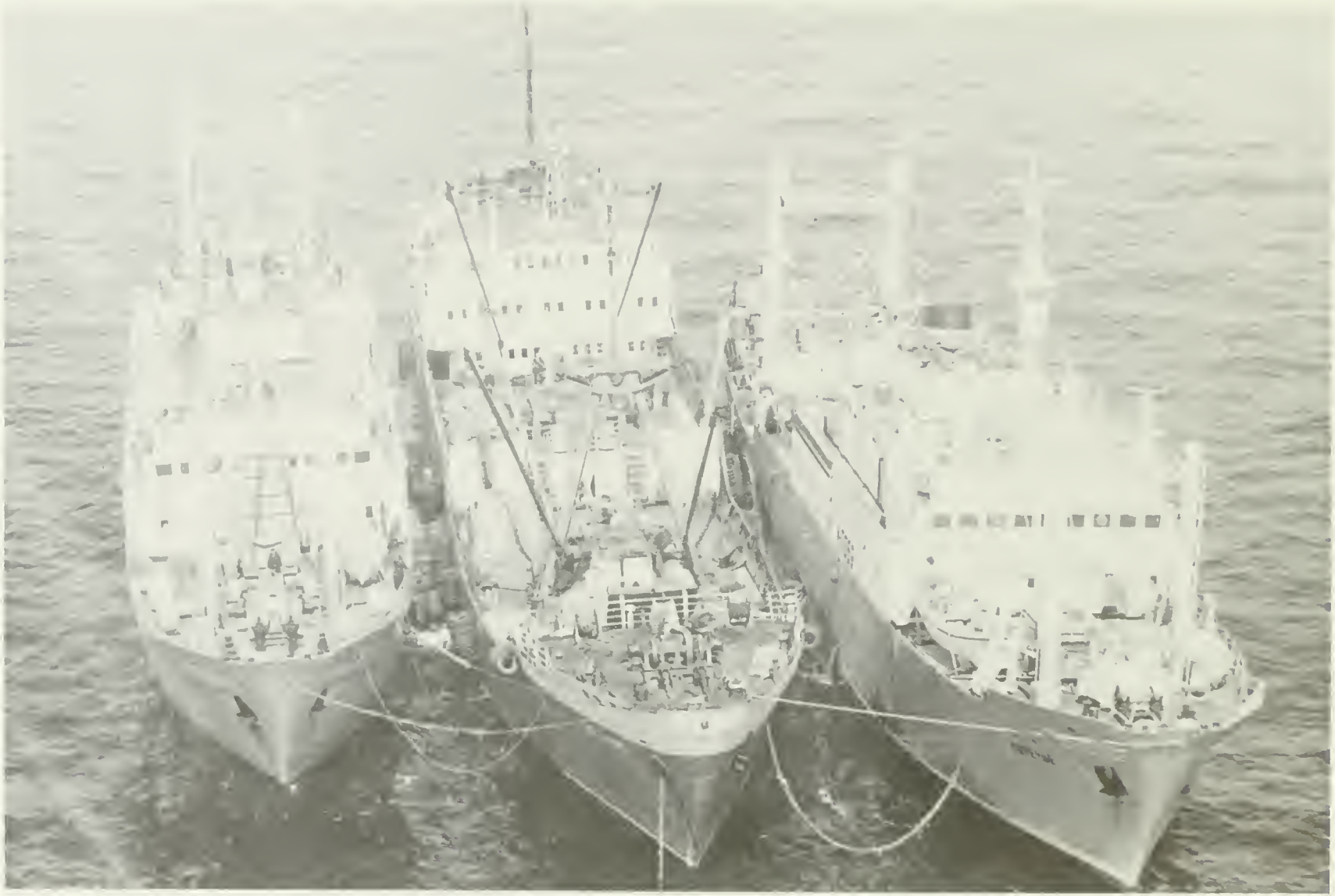


Photo 3.–A Soviet refrigerated fish transport prepares to accept fish from two stern factory trawlers.

Photo 4.–A Soviet stern trawler delivers its catch to a larger vessel and takes on supplies. Frank Walter Photography